DECLARATION FOR PHD THESIS

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ABSTRACT

MOSQUES IN ISLAND SOUTHEAST ASIA (15th–20th CENTURY)

The objective of the study is to highlight factors causing transformations on the mosque's form and functions, through critical analysis on the mosque's physical attributes. The mosques are selected from various important port cities of the region, spanning from the 15th to the 20th century. By adopting analytical and generative typological methods, the design parameters of the mosques were extracted. Comparative study is performed between the data retrieved and the data acquired from the analysis on the Prophet's Mosque archetype, in order to seek explanations for the emergence of distinctive patterns or lack thereof. The outcome of the analyses demonstrated the distinguished qualities of the vernacular mosques in Island Southeast Asia and their compatibility with Islamic requirements.

The thesis is divided into eight chapters. Chapter 1 discusses the research background, problems and methodology adopted for the study. Chapter 2 reviews available literature pertaining to the study of mosques in Island Southeast Asia, while Chapter 3 looks for the function and form of mosque in Islam by reviewing Islamic classical sources. Chapter 4 is a catalogue of mosques selected for detailed analysis, outlining each mosque's brief historical background and its salient features. The remaining chapters present detailed analyses conducted on the mosques and discussions on the findings. The detailed attributes of mosques in Island Southeast Asia are highlighted and compared to the design parameters of the Prophet's Mosque archetype. The results uncovered the ingenuity of the vernacular mosque as the product of Islamic civilisation of the region. This thesis concludes by tracing the changes occurring into the building culture of the Muslims in Island Southeast Asia. The emphasis is upon interpretation of the material culture as a way of understanding the thinking of the Muslims of Island Southeast Asia in relation to the mosque as a religious institution.

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To them - my beloved parents, my husband and children - I dedicate this thesis.

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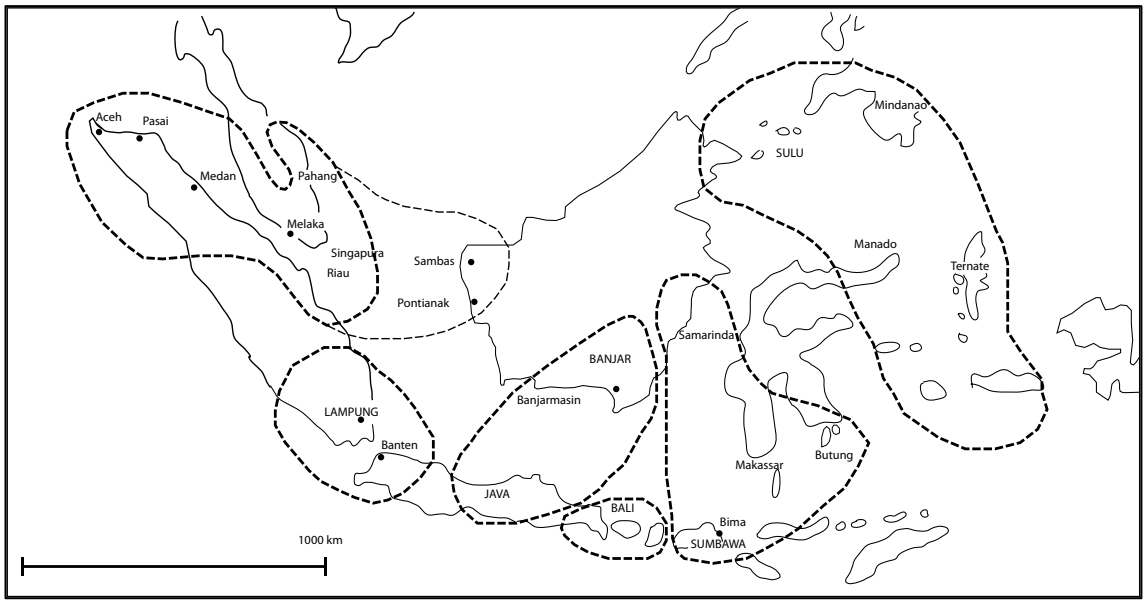
1.1 Introduction: Pre-Modern *Dunia Melayu*

The region of Island Southeast Asia may be roughly defined as the area south of China and east of India. It consists of over 13,000 islands spreading from the northern tip of Sumatera to Irian Jaya. At present, it is made up of six nation states: Malaysia, Singapore, Indonesia, Brunei, the Philippines and East Timor. Prior to the 19th century, however, the concept of national boundaries as they exist today was alien to the people of Island Southeast Asia (Steinberg, 1987, p. 5). The people of this region, which was primarily made up of the Malay Peninsula and the Indonesian Archipelagos, not only shared common geographical conditions, but were also anthropologically and economically distinct. The nature of interactions from one region to the other and between cultural groups induced a condition whereby no cultural feature was completely unique, as highlighted by Barbara and Leonard Andaya:

> 'In some cases lifestyle of one linguistic community was virtually indistinguishable from another with which it commonly interacted; in other cases distinct cultural characteristics persisted although the groups might live in close proximity. Even when differences appeared extreme, certain societal traits were shared because in various ways all groups were responding to a similar physical environment…' (Andaya & Andaya, 1982, p. 9).

Anyone traveling to the region would have noted the similarity of climate, flora and fauna, human cultivation and language. More than half of the populations speak languages belonging to the proto-Austronesian family group (Reid, 1988, Vol. 1, p. 3). Due to its strategic location as a transitional post for traders waiting for favourable wind to bring their ships across the Indian Ocean or the China Sea, the Indians, Persians, Arabs and Malays named this region 'the lands below the winds' (Reid, 1988, p. 6). This expression underlines the significance of the region's geographical location as well as the nature of interactions between the local people and the maritime societies. While for the outsiders (i.e., people 'above the winds') the region was only reachable by sea, for the people of Island Southeast Asia it was also the sea that connected rather than divided them (Lombard, 2000b, p. 14).

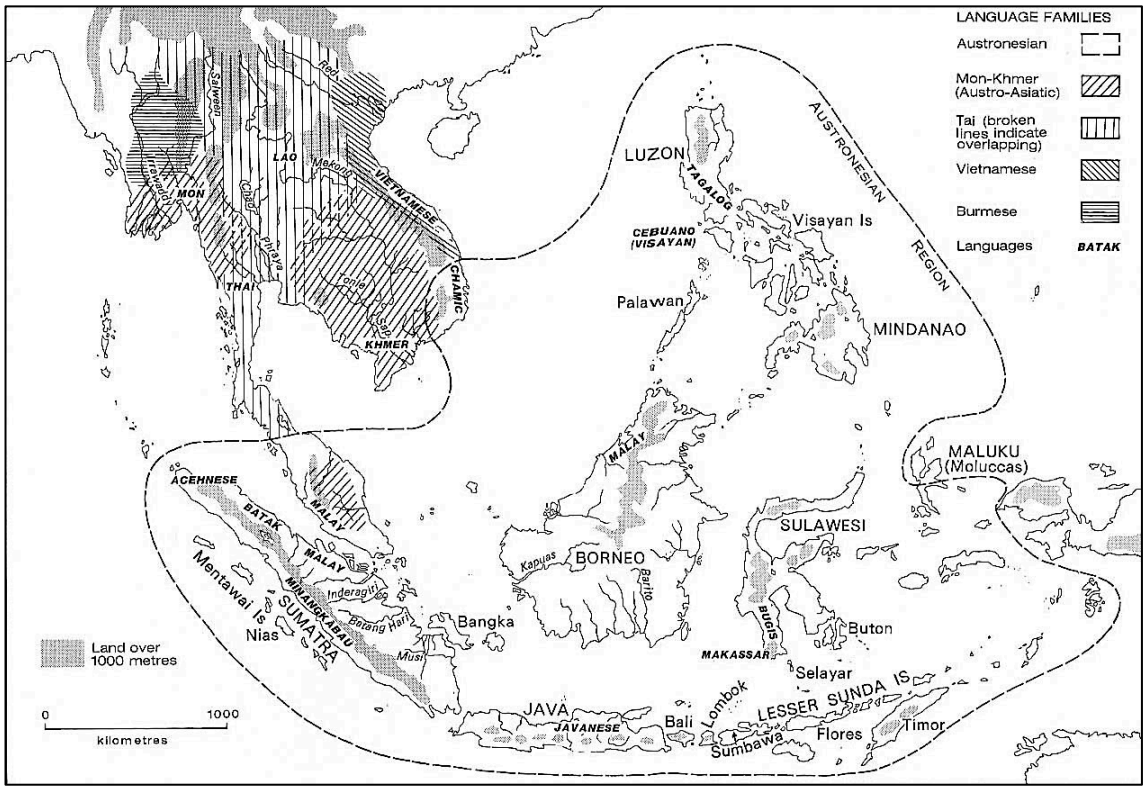
The concept of the sea being a critical cultural connector can be demonstrated quite clearly by looking at cultural patterns. Both sides of the Straits of Melaka (made of the Malay Peninsula, Riau Archipelago, Sambas and Pontianak in Kalimantan, and northern Sumatera) shared common cultural traits, while Lampung and regions south of Sumatera were culturally connected with Banten and the West of Java. Similarly, Sandakan, Sulu Archipelago, Mindanao (and nearby regions in the Southern Philippines), Ternate and Ambon were historically and culturally connected; so was central Java to Southern Kalimantan (Lombard, 2000b, pp. 14–7) (Map 1-1).



SOURCE: (LOMBARD, 2000B, P. 17)

Map 1-1 Sea as maritime network connector of Island Southeast Asia.

Apart from the geographical factors, the societies in Island Southeast Asia shared other common traits that compel us to see them as a unit rather than segmented by the recently imposed national boundaries. During the 15th through the 17th centuries, trade was bustling in the port cities of the archipelago, mainly stimulated by an intense demand for cloves, nutmeg and pepper, which were at that time the prizes of world commerce (Steinberg, 1987, p. 146). Along with a maritime network, Islam spread to the coastal regions following the same routes, benefitting from the use of *Bahasa Melayu,* the Malay language, which was the lingua franca of the archipelago (Map 1-2).



SOURCE: (REID,1993, P.2)

Map 1-2 The Malay Archipelago (Malay World or *'Dunia Melayu'*).

Bahasa Melayu became the language of communication, instruction and trade, as well as the main medium in Islamic proselytization efforts. When the Portuguese arrived in Melaka in the early 16th century, the use of this language was widespread, as is evident from the account of João de Barros: 'Though the heathens differ from one another in their languages, almost all of them speak *Malayo de Malaca* (Melakan Malay) because it is the language most used in the whole region' (Dion, 1970, p. 143). The bond between Islam and *Bahasa Melayu* was probably the origin of the Malay-Islamic sentiment that persists up to the present time, to the extent that this region was intimately identified as *Dunia Melayu* (Malay world) despite the Malays being only one of several hundred ethnic groups (Kratz, 2002, pp. 425–6). At the height of Melaka as the Islamic centre, 'to become Moslem, it was said, was to *masuk Melayu*, "to enter [the fold of the] Melayu"' (Andaya & Andaya, 1982, p. 55).

Adherence to Islam not only deepened the sense of commonality among the people of *Dunia Melayu,* it also provided tangible and temporal benefits to the local *rajas* and their kingdoms. Pasai, which accepted Islam towards the end of the 13th century, consequently became a favoured place of transit for Indian Muslim traders

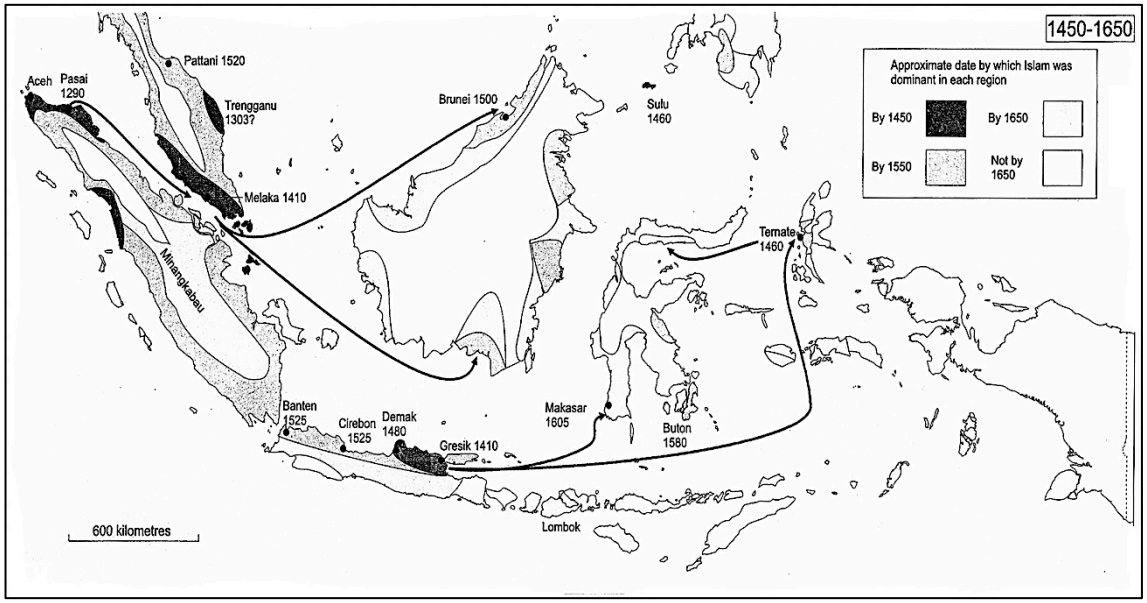
(Andaya & Andaya, 1982, p. 53). Melaka, which followed suit in the early part of the 15th century, quickly transformed into an international entrepot, and acquired a respectable position 'as a commercial and religious centre…[and] the yardstick by which other Moslem kingdoms in the archipelago were measured' (Andaya & Andaya, 1982, p. 54).

The simplicity of the Islamic ideology was attractive to the lay people, and consequently the rulers. In addition, the adherence of these rulers to Islam brought them prestige. In *Dunia Melayu*, where, prior to the coming of Islam, kings were revered as *devarajas* (Heine-Geldern, 1956, pp. 7–10), this concept of divine kingship quickly found its new embodiment through the reinstatement of the rajas as being the *dzillu Allah fi'l'alam*, or "Shadow of God on Earth" (Osman, 1985, p. 70). With Islam, the bond connecting the people was propelled elevated to another level (i.e., as the members of the global Islamic community [*ummat*]), that in the world of the 16th and 17th centuries included 'the fabled Rum (Turkey) and Mogul India' (Andaya & Andaya, 1982, p. 53).

While there has been much debate on the theories of Islamisation in this region, especially pertaining to the origins of the early Islamic missions[1], there is no doubt that the Indian Ocean maritime trading networks were vital mechanisms that allowed Islam to spread from the western to the eastern part of the archipelago in a systematic fashion

[1] Theories on the coming of Islam to the Malay Archipelago have been a continuing debate among scholars. Due to lack of coherent and reliable data, these theories have remained inconclusive. The fact that Islam was first established in the port cities, renowned for their metropolitan and multicultural characteristics, in addition to the fact that Island Southeast Asia sits at the crossroad between Indian Ocean and Chinese Ocean maritime networks, adds to the challenge in establishing a prevalent or dominant influence in the Islamisation of the people. G.W.J Drewes and many Dutch scholars believe, due to the similarity in madhab (al-Shafi'i), that the Arabs of al-Syafi'I who resided in Gujarat, Malabar, in India, were the agents in the proselytization efforts (Drewes 1968, pp. 429–440). Snouck Hurgronje proposed that the Muslim Deccan from Dakka were the first to have brought Islam to the region (Hurgronje 1924, p. 7). Based on the grave marker found in Pasai dated 17 Dzulhijjah 831H/ 27 September 1426, as well as the similarity of its design and techniques with the gravemarker of Maulana Malik Ibrahim in Gresik, East Java (d. 822/ 1419), J.P. Moquette said it was probable that Islam originated from Gujarat (Moquette 1912, pp. 536–48). Refer also to other discussions on the same topic by S.Q. Fatimi (1963) "Islam Comes to Malaysia" and Alijah Gordon (2001) in "The Propagation of Islam in the Indonesian-Malay Archipelago," which is a compilation of articles written on the Islamisation of Island Southeast Asia.

following the inter-island trade routes (Map 1-3). The dynamics of this networking are evident from surviving Islamic material cultures.



SOURCE: (CRIBB, 2000, P. 44)

Map 1-3 Approximate dates of conversion to Islam and lines of Muslim religious influence in the archipelago (1450–1650).

1.2 Early Mosques of Island Southeast Asia

Among the oldest extant mosques, according to records, are the Masjid Agung Demak (b. 15c), Masjid Sunan Ampel, Surabaya (b. 15c), Masjid Merah Panjunan, Cirebon (b. 15c) and a few others in Java that were built in the 16th century. Most of the surviving early mosques are currently distributed in modern Indonesia, mainly on the islands of Java and Sumatra, which have a list of over one hundred pre-19th century mosques (Bambang, 2000, p. 107).

None of the mosques belonging to the Islamic period survived in Melaka, despite the city being an influential Islamic centre in the 15th century. The earliest mosques found in the Malay Peninsula are Masjid Tengkera, Melaka (b. 1728), Masjid Kampung Hulu, Melaka (b. 1728) and Masjid Kampung Keling, Melaka (b. 1748), which were all built by the Dutch administration; and Masjid Kampung Laut, Kelantan (c. 18c), which was relocated to Nilam Puri in 1968 from its original site in Kampung Laut.

Figure 1-1 Masjid Agung Demak (b. 1466–1479) in Java.

Figure 1-2 Masjid Agung Banten (b.15c).

Figure 1-3 Masjid Menara Kudus (b.16c).

The form of the earliest surviving mosques of *Dunia Melayu* indicates that design ideas travelled from coast to coast. The *tajug* or pyramidal roof model is adopted primarily in the principle mosque (*masjid al-jami'*) or *Masjid Agung*. The popularity of this model is evident from its presence in every part of *Dunia Melayu*.

The origin of this prototype can be seen in the oldest surviving wooden mosque, Masjid Agung Demak (b. 1466–1479), in Java (Figure 1-1). This mosque, which is highly revered by the Muslims in Java, sets the archetypal form of principal mosques in the region to the extent that mosques adhering to its architectural style are sometimes referred to as *'Masjid Demakan'* (Demak-like mosque) or simply the 'Javanese mosque' (Roesmanto, 2000, p. 79).

The familiar architectural elements often associated with mosque design somehow were not integral components to the Javanese mosque idiom. Most glaring is the absence of a minaret. If it was built, it was an addition rather than an original component of the mosque. As is evident in Masjid Agung Banten (b.15c) (Figure 1-2) and Masjid Menara Kudus (b.16c) (Figure 1-3), the minarets were built of different material, detached from the main building. The roof is a tiered pyramidal roof[2] instead of a dome, which in contrast is a typical identifier of mosques in mainland Islam. The Javanese mosque is a square plan[3] detached building with ample surrounding open space, the boundary of which is marked with gated fences.

From Sumatera to Ternate, the pyramidal tiered roof forms became the distinguishing feature of the Island Southeast Asian mosque idiom (Frishman & Khan, 1994, pp. 12–3). While regional variations exist, mainly evident from decorative schemes or constructional methods employed, this model prevails throughout the archipelago.

What was the origin of this form? What were the design-decision factors responsible for the adoption of this model? Some scholars have suggested[4] that the

[2] Usually two to five tiered, as in the case of Masjid Sultan Ternate, and seven tiers in Masjid Agung Banten.

[3] Rectangular plan is a variation to the original Javanese mosque model.

[4] See Chapter 4, Literature Review, for an in-depth discussion of this topic.

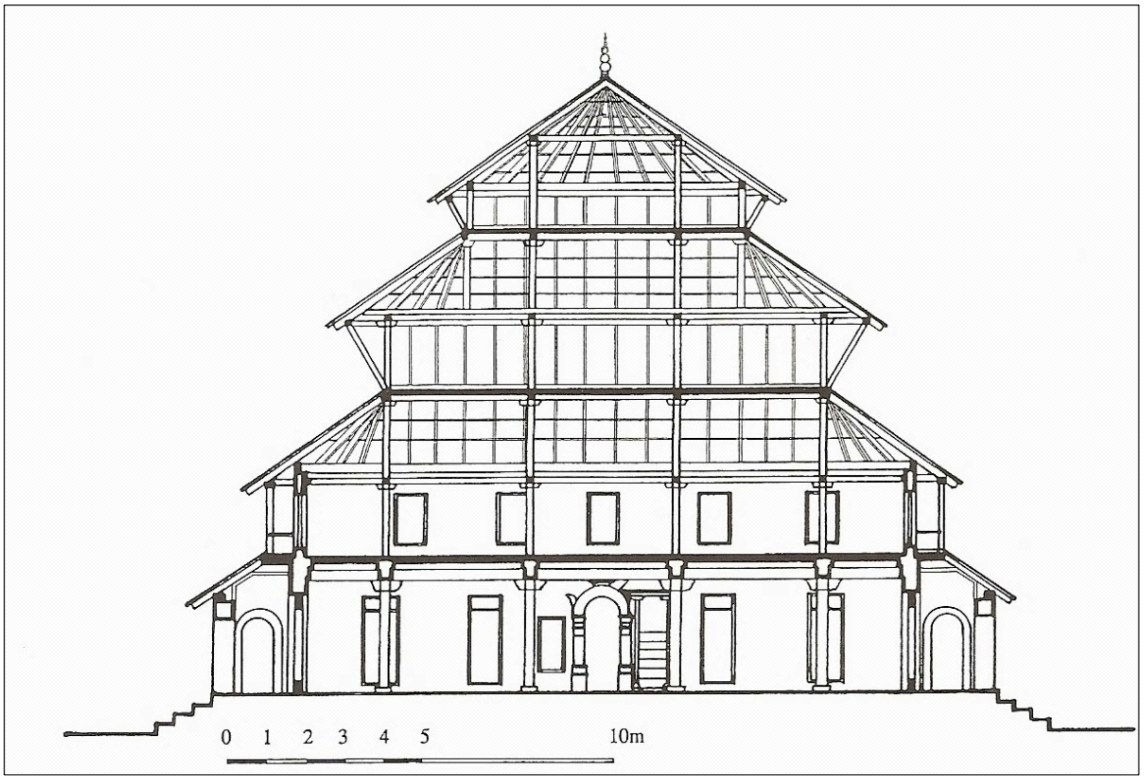
model came from abroad, specifically from Kerala[5] in South India. The similarity in cultural practices (the *Shāfi'ite* legal tradition and mosque architecture) between Kerala and Java suggested historical connections between these two regions (Woodward, 1989, pp. 54–7). As Kerala lies on the most direct route from Makkah to Southeast Asia, it was the most logical transit for pilgrims and traders from both parts of the world (Woodward, 1989, p. 56). In addition, the parallels between Kerala and Java were strengthened by the fact that Kerala was also culturally different from the rest of India, and its commerce and culture were more closely linked with those of Arabia and Southeast Asia than with the rest of India (Dale, 1980, p. 26).

This argument is also supported by the distinctive difference between Kerala's mosques and mosques built under the auspices of the Mughal rulers. Instead of being influenced by the Mughal Islamic idioms, the architecture of the old mosques of Kerala is believed to have been inspired by the indigenous Jain building tradition. These mosques were built of wood rather than stone or brick, and have three-tiered roofs instead of domes, reflecting South Asian Hindu and Jain temples' influence (Woodward, 1989, p. 54).

K.J. John, in describing a Malabar (Kerala) mosque, elaborates:

> [Malabar mosques are] generally covered structures comprising a large prayer hall in the form of rectangular cloister…in the *centre*, with covered verandas on all sides, locally known as *charu* and a front porch corresponding to *Ardha Mandapa*. The closed veranda around the sancrum sanctorum of the mosque appears to be constructed with the…circumambulatory path of the Hindu Temple in mind. These mosques also resemble typical multi-storeyed Malabar house and they are built atop a foundation of laterite stones. The double and triple ridged roofs are the main accents of Malabar mosques as elegantly exemplified in the Misqual mosque of Calicut (John, 1995, p. 50).

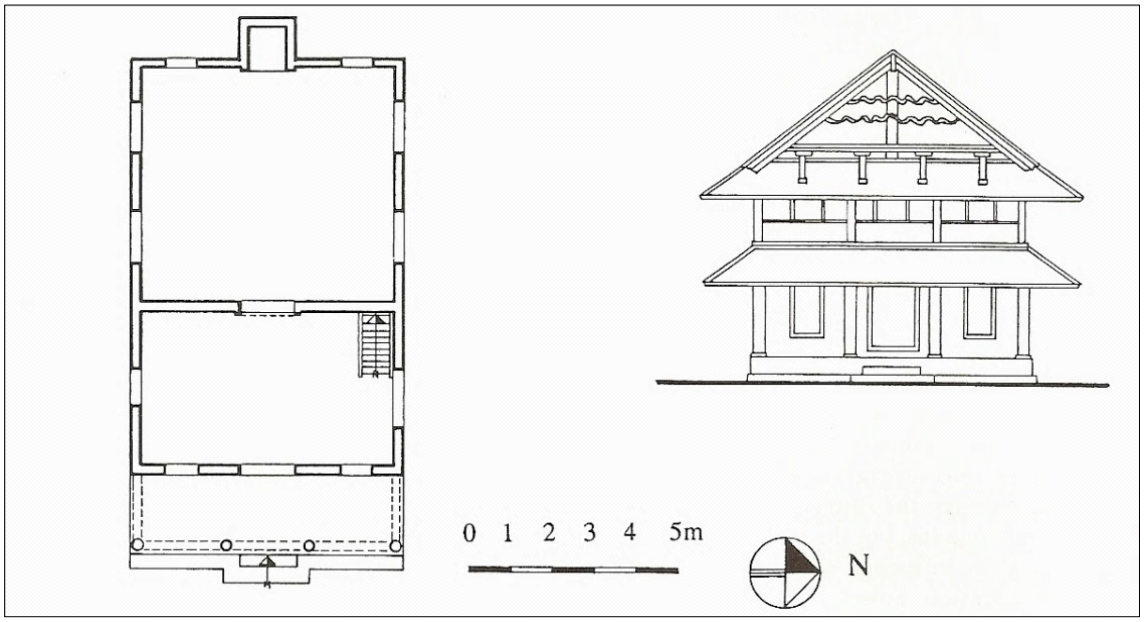
[5] Kerala and Malabar are sometimes used interchangeably by authors when referring to the mosque origin. In reality, Malabar is a town within Kerala. Malabar sometimes also refers to the Malabar Coast.



(SOURCE: SHOKOOHY, 2003)

Figure 1-4 Mithqālpalli Mosque, transverse section, showing the elevation of the *mihrab* and the *mimbar*

The *Misqual* or *Mithqalpalli* mosque referred to in the text (Figure 1-4) is exemplary of the Kerala mosque idiom, typically having a multi-storeyed construction (two levels or more), with upper level functional spaces used for conducting religious classes, as well as transit spaces for travellers (Shokoohy, 2003, p. 113). The floor to ceiling height is relatively low for a public building (approximately three metres high), probably following the typical Malabar house design as suggested by John (1995). The veranda surrounding the main hall is closed with walls, and the floor plan of the mosque is typically rectangular. In terms of structural configuration, the columns are equally placed, and in smaller mosques such as *Hadrapalli* (Figure 1-5) the construction method resembles house construction with perimetral columns supporting the roof.

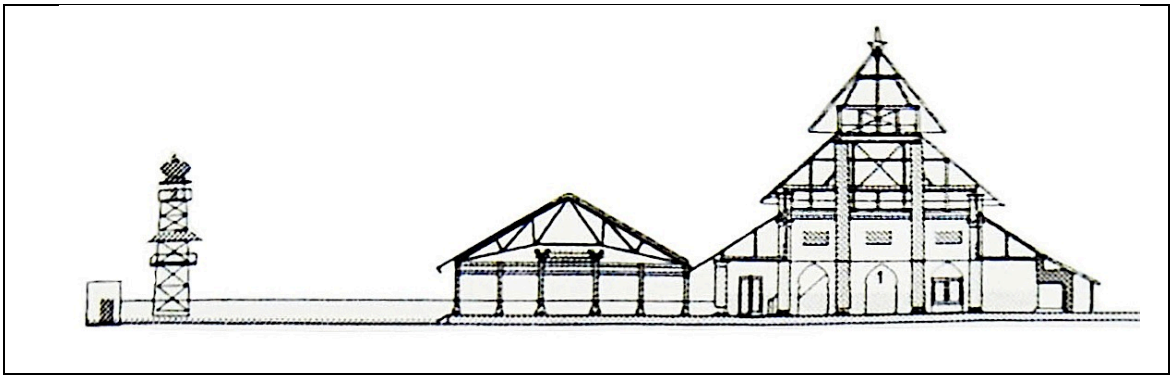


(SOURCE: SHOKOOHY, 2003)

Figure 1-5 Mosque Ḥaḍrapaḷḷi, Kerala, plan and east elevation, in its original form.

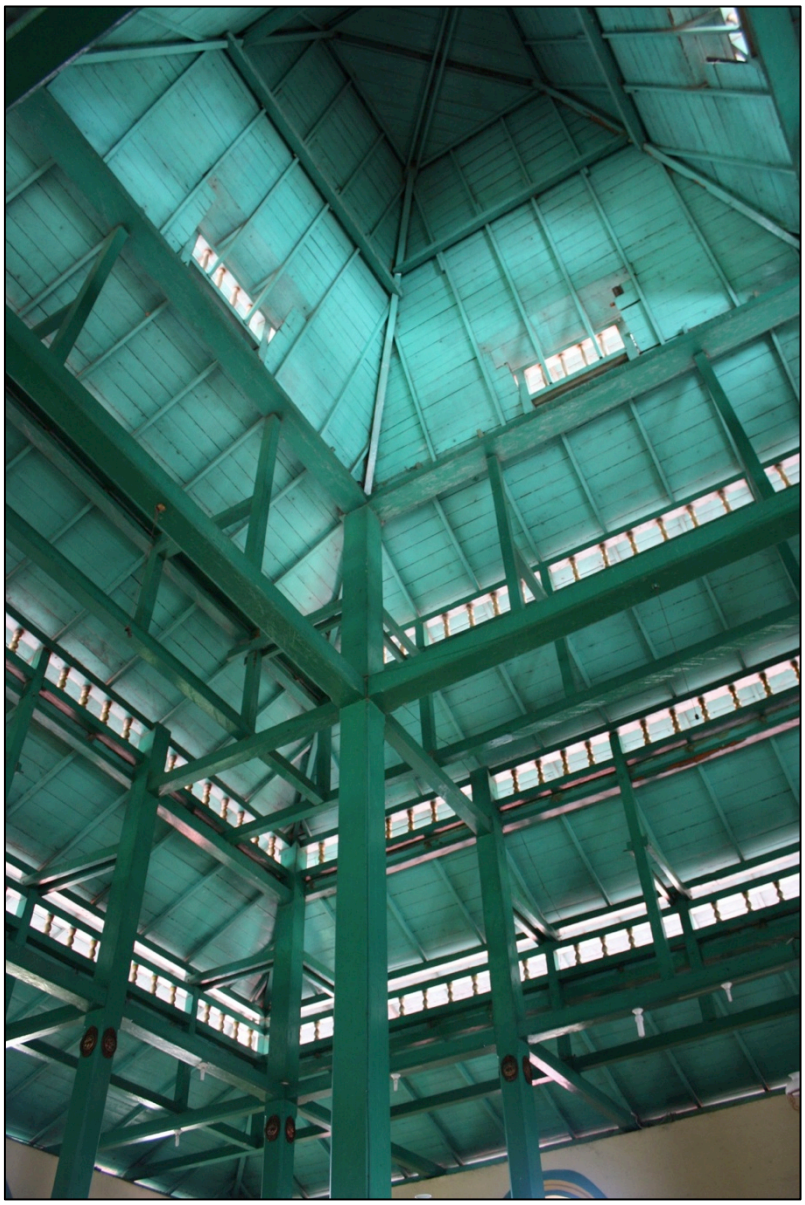
Apart from the resemblance of its roof form and the use of wood as the main constructional material, this study finds very few similarities between the Javanese and Kerala models. A number of design elements give the Javanese mosque its distinguishing features. The first is the proportion of the building. The Javanese mosque is characterised by its huge tiered pyramidal roof form covering the prayer hall, often with a square plan. The height of this roof is defined by the height of the central columns (*soko guru)* supporting it. The size of the floor plan (i.e., the limit of the floor area), in turn, is proportionate to the height of the roof. Therefore, the bigger the prayer hall is, the taller the building will be (see Figure 1-6).

Second is the structural configuration of the building. Unlike the Kerala model, the Javanese mosque is a single-storey building, despite having a multi-tiered roof. The interior space opens up to the peak of the roof height, revealing exposed roof structural members and creating a breath-taking view, as in the case of Masjid Agung Ternate (b. 1610) (Figure 1-7).



SOURCE: (ARCHIVE UNIVERSITAS GAJAHMADA INDONESIA)

Figure 1-6 Masjid Agung Demak section.



(PHOTO CREDIT: ALI AKBAR)

Figure 1-7 Masjid Agung Ternate's exposed roof structure interior.

In addition, the Javanese model is a single detached building, with ample surrounding open space and *serambi* (veranda) built to the east, north and south of the main hall. It has the pattern of extending outwards from the core, as is evident in the incorporation of the *serambi*, often built as a gable roof structure. These *serambis* are generally opened to at least one side, not closed as in the veranda of the Kerala design. They also functioned as semi-public spaces for conducting meetings, social gatherings or religious feasts. Sometimes the space is also dedicated as a female prayer area as part of the expansion plan. The existence of the front porch in Javanese designs, however, tends to follow the concept of *pendopo* in the Javanese house (i.e., as the face or frontier of the house where non-related guest members are entertained by the house owners).

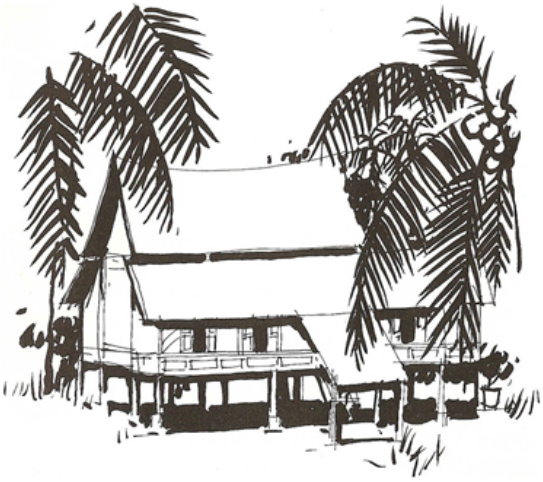
While Kerala traditional architecture may have provided a clue to the origin of the Javanese mosque form, it is more reasonable to believe that local builders would have drawn references from examples closer to home. The vernacular architecture of Southeast Asia, especially found in domestic and religious buildings (Figures 1-8 and 1-9) such as the Burmese wooden monastery form of *Pyathat*[6] (Figure 1-10), could have served as references for the early builders, in terms of functional layout and constructional methods.

[6] *Pyathat,* which means a pavilion with multi-tiered roofs.

SURAU AUR, PATANI

LONG-ROOF HOUSE TYPOLOGY

MASJID TELUK MANOK, PATANI



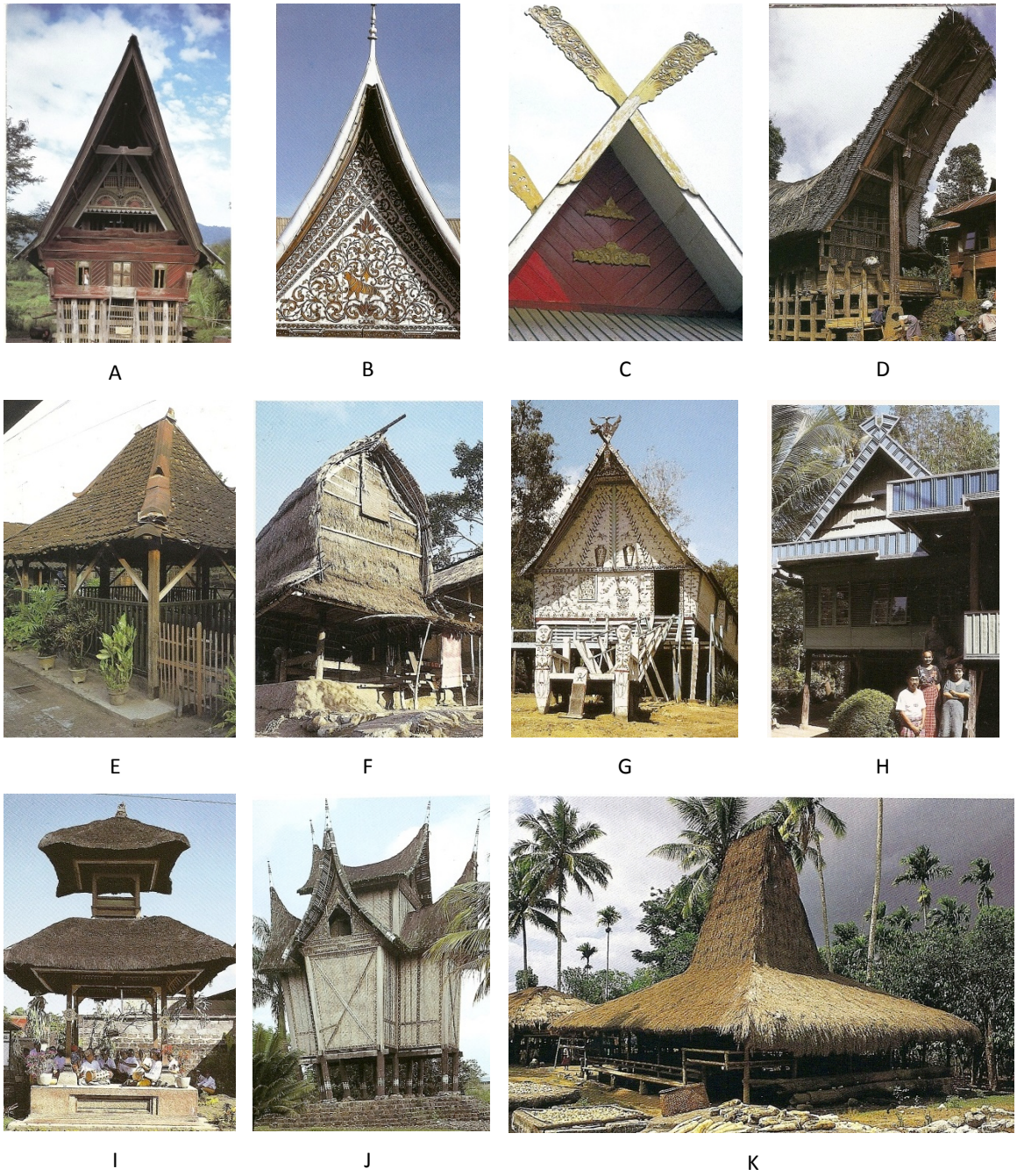
LONG-ROOF HOUSE TYPOLOGY

MASJID LUBUK BAUK, WEST SUMATERA

BARN HOUSE, KARO BATAK

EDITED FROM: ABDUL HALIM (1996), LIM (1991) AND DAWSON & GILLOW (1992)

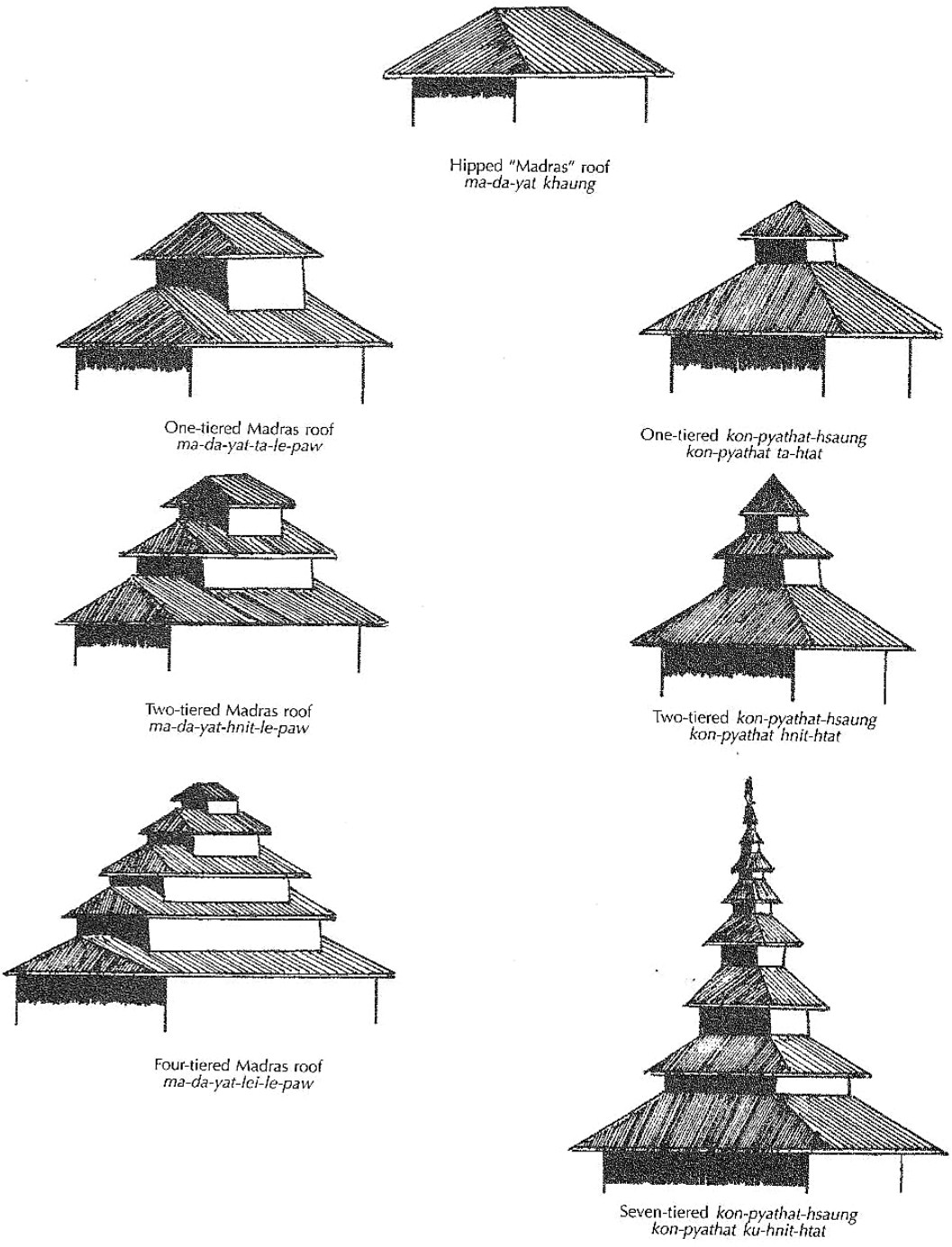
Figure 1-8 Mosques originating from regional house forms.



(A) Toba Batak. (B) Minangkabau-Bukit Tinggi. (C) Riau. (D) Toraja. (E) Bale pavilion, Yogyakarta. (F) Sasak, Lombok. (G) Dayak, Kalimantan. (H) Bugis. (I) Bali. (J) Minangkabau, Pagarruyung. (K) Sumba.

EDITED FROM: DAWSON & GILLOW (1992)

Figure 1-9 The distinctive regional features of traditional houses of Southeast Asia.



SOURCE: (SYLVIA FRASER-LU, 2001, P. 43)

Figure 1-10 *Madras* and *Kon-Pyathat-hsaung* roof forms.

Unfortunately, the mosque architecture of Island Southeast Asia has never been subjected to any serious inquiry in the major works pertaining to Islamic art and architecture, except as a passing statement in introductory chapters. A quick survey on available literatures pertaining to the studies of Islamic art and architecture will soon reveal how little information one can get about the Islamic material culture of this region. With the exception of Hugh O'Neill's excellent discussion on "South-east Asia" in *The Mosque* (Frishman & Khan 1994, pp. 225–241), the regional mosques were hardly considered as being a component of the general and global Islamic building characteristics.

In Robert Hillenbrand's *Islamic Architecture* (1994, pp. 2–3), a map showing "the Islamic World" stretching from the west coast of Africa stopped just after the Indian continent, precluding the whole of Southeast Asia and China. In addition to its remote link to mainland Islam, the architecture of the early mosques of *Dunia Melayu* was found to have been derived from local pre-Islamic rather than mainstream Islamic traditions.

This particular trait led many scholars to view the Islamic factor as merely an additional 'layer' to the predominant Hindu-Buddhist traditions prevalent in the region, thus perceived as perhaps "less Islamic." Such perceptions, with respect to the place of Islam in the cultural practices of Island Southeast Asia, were identified by John Bennet when he commented:

> Subsequent European scholars working from the viewpoint of a secular society have often been ill-equipped to understand the subtle dialogue between art and spirituality in the Islamic world of Southeast Asia, especially its engagement with other cultures. The mechanist model of the 'layer cake' used to describe the sequential relationship of Islam to Hindu and Buddhist traditions, brought from India in the early first millennium, was reinforced by studies which emphasized the dichotomy between the demands of religion (*agama*) and indigenous customs derived from ancestral law (*adat*). Major scholars, such as Snouck Hurgronje, and later Richard Winstedt, whose writings highlighted the gulf between a theory of textural Islam and its manifestation in local daily practice, underline an implication that Islam in Southeast Asian societies was somehow less authentic than that of the Middle East (Bennet 2005, pp. 248–9).

It is this feature of Island Southeast Asia that made it crucial to study the mosque, both as a cultural and religious product. More important is to uncover the role of Islam in shaping the material culture of this region. Did Islam merely touch the surface of cultural tradition, and was it unable to successfully penetrate its essence?

In his concluding paragraph of "*Islam Comes to Malaysia*" on the subject of 'when' and 'how' Islam came to Malaysia (modern Malay Peninsula), Q.S. Fatimi remarked that 'Islam had come, but it appears that it had not come to stay, for it was yet to be accepted by the Malaysians themselves' (Fatimi, 1963, pp. 99–100). Here, Fatimi was referring to the earliest contacts that occurred between Muslim traders and the local communities prior to the 13th century. His statement indicated that, despite the early presence of Muslim communities in the region, the Islamisation efforts were so protracted that we cannot be certain if the teachings were effectively accepted by the people. As Fatimi underlined, 'We can say the *Muslims had come*[7] and had even settled in Malaysia, but not Islam,' (Fatimi, 1963, p. 100).

Hasan Ambary, the Indonesian Islamic archaeologist, was more precise in describing the effects of Islam on the local material culture. Islam, he underlines, only adopted the pre-Islamic building tradition both in techniques and in its aesthetics, but did not introduce a new cultural tradition (Ambary, 2001, p. 63). At this juncture, perhaps it is appropriate to begin asking: What exactly was the place of the mosque in the thinking of the Muslims in Island Southeast Asia? What caused the regional Muslims to adopt a certain model for their mosques and discarded other models?

Is there any design that could be considered "more Islamic" than the others? Was the design idea derived from the Islamic doctrine (i.e. the *Qur'ān* and the *Sūnnāh*), or was the idea relayed to them through religious patrons? Who were these patrons, and did they have access to the design principles outlined by the doctrine, or was the design a result of *ijtihad* (personal reasoning)[8]? Or did they arrive at the design solution and its form based on borrowed ideas, as suggested by some scholars on the origin of the Javanese design?

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[7] Italicising from Q.S. Fatimi.

[8] According to Mohammad Hashim Kamali (1989, p. 468), *ijtihad* is the most important source of Islamic law next to the *Qur'ān* and the *Sunnah*. While divine revelation and the prophetic legislation discontinued after the demise of the Prophet (S), *ijtihad* is a continuous process as well as the main instrument of interpreting the divine message and relating it to the changing conditions of the Muslim community in its aspiration to attain justice, salvation and truth. See Kamali (1989), *Principles of Islamic Jurisprudence*, Cambridge: Islamic Texts Society, pp. 468–499.

1.3 The Question of Islamic Identity in Mosque Design

The debate on the definition of 'Islamic architecture' or 'Islamic art' is an old yet important discourse, especially in the context of Island Southeast Asia. Robert Hillenbrand considers that the use of the word "Islamic" as an adjective is an advantage, 'as it refers as much as to culture…as to a faith' (Hillenbrand, 1994, p. 8). In a broad yet detailed discussion on the formation of Islamic Art, Oleg Grabar suggested that the adjective "Islamic" refers to 'a culture or civilisation in which the majority of the population or at least the ruling element profess the faith of Islam.' Thus, Islamic art is:

> One that overpowered and transformed ethnic or geographical traditions, or else one that created some peculiar kind of symbiosis between local and pan-Islamic modes of artistic behaviour and expression (Grabar, 1973, p. 2).

In both of these definitions, faith, as much as culture, is a critical component in the making of distinctive Islamic artistic language. The symbiosis between local culture and Islamic influence in regional mosques thus forms the central subject of inquiry in the field of Islamic architecture. Whatever the stylistic outcome is, this symbiosis seems to produce a range of artistic and architectural elements identifiable as belonging to the Islamic tradition.

This can be seen in Hillenbrand's elaboration on the use of the terminology when he argued that 'Islamic architecture does have a distinctive quality, even if that quality is not easily definable' (Hillenbrand, 1994, p. 8). The recurrence of visual patterns, especially marked by high levels of abstractions through the employment of geometrical and vegetal themes, in addition to the absence of sculptural figural representations, served as distinguishing qualifiers of Islamic art in operation. Similarly, the manner in which materials, techniques and building elements were executed forming a peculiar style not to be found in other architectural traditions suggests the presence of an undefined yet recognizable quality of Islamic art (Hillenbrand, 1994, p. 8).

If there is a tendency among scholars of Islamic arts to stereotype the kind of qualities they expect of Islamic cultural materials, it is largely due to their training in seeing the rich examples found in abundance in mainland Islam. Such training, however, is to the disadvantage of the Islamic material culture of Island Southeast Asia,

as the artistic products of this region often do not share any of the familiar traits encountered in the Islamic heritage of mainland Islam. The notion that the artistic tradition of Southeast Asia is "less Islamic" was somewhat expressed by Hillenbrand when he said:

> Nearly all the mosques in these areas are of post-mediaeval date, and therefore lie in the shadow of developments in the Islamic heartlands. There is, moreover, a strong vernacular element in these regional traditions, for they draw very heavily on a reservoir of ideas, practices and forms which owe very little to Islam. Thus, for reasons which are as much historical and cultural as geographical, they do not belong in the mainstream of mosque architecture (Hillenbrand, 1965, p. 678; Hillenbrand, 1995, p. 65).

Apart from its architectural form, which is said to have been derived from Hindu temples[9], or merely a borrowed form from abroad, there is very little evidence to suggest that local Muslims connect themselves to the broader Islamic traditions. One peculiar example is the absence of the art of calligraphy, despite the art being the most revered and accepted art form, and one that has been used from the earliest times 'as the major, and sometimes the sole type of mosque ornamentation' (Thackston, 1994, p. 44).

The earliest employment of the Arabic calligraphy in Island Southeast Asia is found on the tombstones spread across the archipelago, and in particular in the epitaphs of the group of old graves found in Pasai and Gresik. The discovery of these tombstones indicated the earliest presence of Muslim settlements. In Leran, within the province of Gresik, the epitaph belonging to Fāṭīma binti Maimun bin Hibatallāh, dated 495 A.H/1082 C.E, was found to have been written in the angular *Kūfī* scripts. From her name it is evident that she was probably of Arab decent (Moquette, 1919, pp. 291–3). Local traditions attributed her name to Putri I Maimun (Mustopo, 2001, p. 43) or Putri Suwari, a notable Muslim princess who died and was buried in Leran (Fatimi, 1963, p. 39).

[9] Refer to Chapter 2 Literature Review on the discussions of the origin of form for the Javanese mosque.

Figure 1-11 The tomb belonging to Maulana Mālīk Ibrahīm.

While undecorated, this headstone displayed the earliest evidence of the use of calligraphy in monumental artefacts of the region. From this aspect, the tomb of Fāṭīma correlates with the presence of another tomb found in Gresik, belonging to Maulana Mālīk Ibrahīm (d. 822 A.H/ 1419 C.E.) (Figure 1-11). Apart from the similarity in the employment of *Kūfī* calligraphy, the tomb of Maulana Mālīk Ibrahīm was markedly different in its overall form, as well as in the selection of words and calligraphic styles. While Fāṭīma's epitaph incorporated the angular *Kūfī* written across the headstone with horizontal bands dividing the scripts, the tomb design of Maulana Mālīk Ibrahīm employed an elegant arrangement of monumental *Naskhi s*urrounding the edge of the headstone, with foliated *Kūfī* for the *Basmallah* invocation inscribed across the large middle band.

Figure 1-12 Gravemarker in the Mount Giri necropolis (circa. 16th century).

The discovery of this early epigraphic evidence has become the subject of heated debate on the origins of Islam in Island Southeast Asia[10]. These early tombs were unique not merely due to the presence of the Arabic inscriptions with their distinctive

[10] See footnote 1.

foliated *Kūfī* calligraphy, but their designs were significantly different from the design of local tomb markers of that period (Figure 1-12). Many scholars believe[11] that these tombstones were in fact imported from Khambat. The use of white creamy marble slabs prepared to a smooth semi-polished finish and the tripartite division of the slab with plaited foliated *Kūfī* calligraphy of the *Basmallah* placed in the central band all carry the signature of the Khambhāt marble carving tradition (Lambourn, 2004, pp. 105–120).

However, more relevant to this research is the application of the art of calligraphy in Islamic material culture, especially in the mosque. Gresik, where two of the earliest tombstones were found, was also the site of Masjid Sunan Giri (original building founded in the 15th century), one of the oldest surviving mosques in Island Southeast Asia. The early discovery of the use of calligraphy in monumental art in both of the tombs may have explained the presence of the Arabic calligraphy in the old mosque of Gresik, which this research found to be the only vernacular mosque to incorporate Arabic calligraphy as part of its decorative scheme (Figures 1-13 to 1-14). Other mosques, such as Masjid Menara Kudus (b. 1549), had merely employed the Arabic script for recording the foundation of the mosque, written in a variant of *Thuluth* (Kalus & Guilliot, 2002, pp. 27–56).

[11] Moquette (1912), Fatimi (1963, p. 31); Tjandrasamita (2000, p. 25), Drewes (2001, p. 134)

Figure 1-13 Arabic scripts of Allāh and ‘Ali.

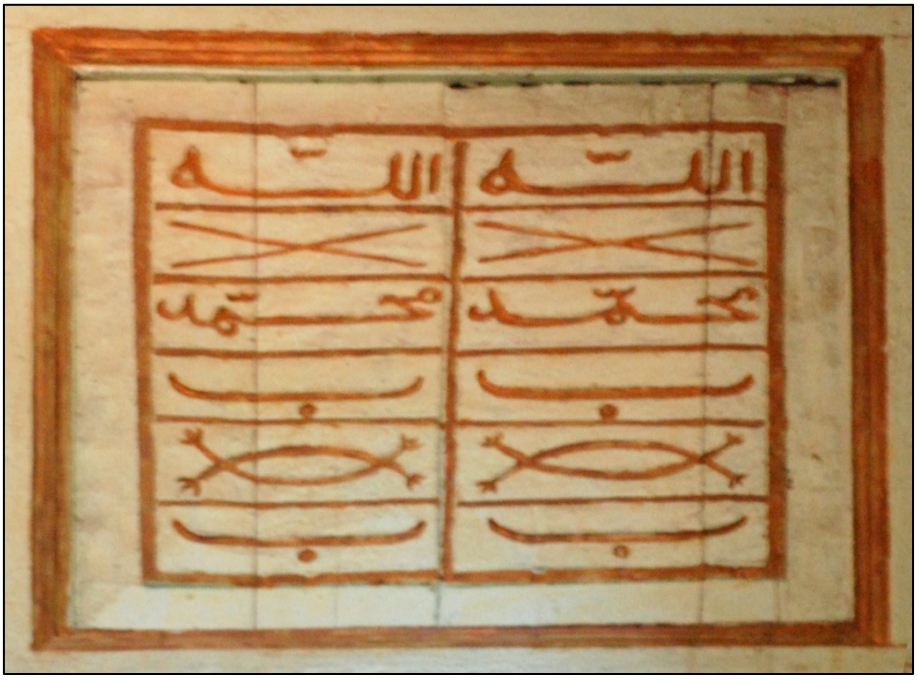


Figure 1-14 Arabic scripts of Allāh and Muhammad.

In Masjid Sunan Giri, the calligraphy incisions were made on the wooden wall panels, main columns and beams at a height just below the ceiling level of the mosque, making it difficult to capture a clear photographic image. However, the content and significance of the calligraphic composition will be discussed here.

Arabic scripts of Allāh and ‘Ali (Figure 1-13), and Allāh and Muhammad (Figure 1-14) were arranged in geometric, symmetrical composition. The fact that ‘Ali is singled out in the decorative scheme indicates that the influence of *Shi’ite* teaching had penetrated Gresik, perhaps through Persian traders. It is also probable that the patron commissioning the calligraphy work was someone with a Gujarat and Southern Indian connection, as, according to Q.S. Fatimi, during the Muslim period they were integral parts of the same cultural unit known as *Dakan* (Deccan), which were “the closely-knit, all-India organisation of the *Śufī* orders and the general employment of the Persian language as the lingua franca of Muslim culture” (Fatimi, 1963, p. 35).

Whether or not the work was executed based upon the instruction of the original founder – the renowned *wali* (saint) Raden Paku (better known as Sunan Giri)—remains unclear. What we know of the background of this patron is gathered from old Javanese sources, among them the records that Sir Thomas Stamford Raffles documented in the *History of Java* (1830). However, these accounts, which were highly narrative, underlined the inter-island and maritime connections between the early Muslim missions in this region. They also narrated the background of Raden Paku, who, due to the conflict between his grandfather (the chief of Balambangan) and his father (Maulana Ishak of Melaka), was given away at birth. The boy later became the student of Sunan Ampel in Surabaya. By the fate of God, Raden Paku met his father in Melaka, on his pilgrimage to Makkah. However, the latter persuaded him to return to Java and build a mosque at Giri so that he would fulfil a prophecy of being a great prince. Thus the narration continues:

> Raden Paku then went to Giri, and having cleared a spot, a mosque and dwelling were soon erected. Numerous proselytes being attracted thither, he was called Prabu Satmate, and sometimes Susunan Ratu Ainul Yakin, but more commonly Sunan Giri. He was afterwards appointed by the king of Majapahit to be chief of the province of Gresik, in the same manner as Susuhan Ampel had previously been appointed (Raffles, 1830, p. 130)

Despite the illustrious nature of the narration, it informs us that the mosque of Giri was built by Raden Paku, who was of Arab descent, at a time when the Hindu Majapahit king was still in reign. It also indicates that around the 15th century there was already a group of influential Muslims in Gresik, whose presence was recognised by the Majapahit king – a story that was corroborated by the presence of the old tombs. In addition, the relationship between Sunan Giri and the Majapahit king was evidenced through the existence of the Majapahit regalia, the eight-pointed *surya Majapahit* (Sun of Majapahit) in the mosque decorative scheme.

Figure 1-15 Calligraphy placed at the centre of the eight-pointed *Surya Majapahit* regalia

At the main columns *(soko guru)* where the main beams meet the main central column, small calligraphic writing in medallion design is placed at the centre of the eight-pointed *surya Majapahit*, surrounded by a stylistic arrangement of vegetal in the form of a stylised butterfly and *kalamakara* (Figure 1-15). The same medallion-like arrangement of the calligraphic design can also be found above the main entrance door (Figure 1-16). This time the calligraphic writing of the verse of the *Qur'ān* placed on

the door lintel was more legible, containing the verses from *Surah al-Munafiqun*, verses 9-10, which read:

> "O you who believe! Let not your properties or children divert you from the remembrance of Allah. And whosoever does that, then they are the losers. And spend (in charity) of that with which We have provided you, before death comes to one of you and he says: "My Lord! If only You would give me respite for a little while, then I should give Sadaqah (charity) of my wealth and be among the righteous" (63: 9–10).

Figure 1-16 The calligraphy of verses from the *Qur'ān* placed on the door lintel.

The calligraphic style found on the door lintel is more angular and closely resembles the monumental *Naskhi* script that replaced the angular *Kūfī* after c. 1250 (Begley, 1985, p. 14). According to B. Moritz in *Encyclopaedia of Islam* (1913, pp. 338–390), the *Kūfī* calligraphic style disappeared from practical use by the end of the 13th century, to be replaced by the round script *Ta'līiq* (later developed into *Nasta'līq)*. A similar style can be found in the well-known mosque of *Quwwat al-Islam* in Delhi (c. 1230), as well as in the *mihrab* of the tomb of Sultan Sher Shah Suri (r. 1545–1554) in Sasaram (Figure 1-17).

SOURCE: (BEGLEY, 1985, P. 72)

Figure 1-17 The *mihrab* of the tomb of Sultan Sher Shah Suri (r. 1545–1554) in Sasaram.

The absence of the *Kūfī* calligraphy in this mosque, as opposed to its presence in the previously mentioned tombs, suggests that the mosque artistic style could have belonged to a later period (i.e., after the diminishing of the *Kūfī* influence). However, within the same mosque, there is a marked difference between the calligraphy found on the upper wall panels of the interior of the mosque and the one decorating the door frames.

While the wall panels exhibited a rigid and almost 'immature' calligraphic style in an unique geometric composition that is incomparable to any other samples found by this research, the design of the door frames suggested that they were products that closely resembled the stylistic Delhi (or *Dakan*) monumental calligraphy prevalent after the 13th century.

This difference suggested that the decorative scheme of the mosque may have been executed by different people, probably at different periods. Given that Masjid Sunan Giri (which is present today) is the mosque that was reconstructed by Sunan Prapen in 1544 C.E., 40 years after the death of Sunan Giri (Moehammad Habib, 2001, p. 59), the difference in the periods of the mosque construction (and reconstruction) and the dates inscribed on the headstones indicate that there was a progressive change in stylistic preferences across the periods.

Unlike tombstones, which could be ordered and transported via sea to consigning patrons, a mosque is an immovable cultural property that is constructed in situ using primarily local materials and expertise. It is possible, however, for non-structural elements of the mosque to be executed elsewhere and brought to the site. It is also possible for design ideas to be transmitted through the personal experiences of influential patrons who have travelled abroad. Similarly, under an influential and capable patron, it is also possible to engage the service of a master craftsman, or even a band of specialist builders. Such was the case with al-Walīd I, the great architect of Umayyad Dynasty (661–750 C.E.) specifically brought in to execute design works based on demands (Kuban, 1994, p. 89).

While it may have been possible for parts of building elements to have been produced in foreign countries and imported to the site, the craftsmanship and technique employed in the mosque indicated that the artwork was executed locally. The calligraphy decoration containing the Majapahit regalia was carved directly onto the structural members, while the calligraphy arranged in geometric composition was done onto the wooden planes, after they have been put in place.

Using wood as the main medium, the calligraphy was accomplished using low relief technique. This technique is not overtly complex; it involves composing and writing the calligraphy text directly onto the wooden panels, with its intended design, thickness and proportion. Then, the carving out and tracing of the letterings to produce a

bevelled effect was performed using different sizes of chisels. This stage could have been carried out by local craftsmen under the direct supervision of someone who knew Arabic.

Who were these artisans? Were they indigenous people who had converted to Islam in the 15th century? Or were they a group of Muslim foreigners residing in Gresik with prior knowledge of writing in Arabic, employed to execute the decorative scheme? If they were indigenous people, local guilds or workshops probably existed to teach and train native Muslims the art of calligraphy both for religious and artistic purposes. However, there is not enough evidence to suggest that such workshops even existed in *Dunia Melayu* prior to the 18th century, or that the art of calligraphy was perceived as a critical component in a mosque's decorative scheme.

As there was no other indication suggesting the presence of local guilds, the calligraphy found in the Masjid Sunan Giri was probably executed by non-native Muslims who lived or transited in Gresik during that period. This hypothesis is supported by the fact that even the tombs of Sunan Giri (d. 1507) and his family members were not inscribed in Arabic calligraphy, despite him being of Arabic descent (Moehammad Habib, 2001, p. 57) (Figure 1-18).

Figure 1-18 The tomb of Sunan Giri (d. 1507) under a closed *cungkup*.

In contrast, the presence of the Arabic inscription on the founding of Masjid Menara Kudus (Kudus from the Arabic word ق د س *quds* referring to *Al-Quds* i.e. Jerusalem), also known as Masjid Al-Aqsa, testifies to the intention of its patron Ja'far al-Sadiq (also known as Sunan Kudus) to bring the Arabic (or perhaps the Islamic) element closer to home by constructing parallels between this mosque and the place it was built and the revered mosque of *Al-Aqsa* in Jerusalem (Kalus & Guillot, 2002, pp. 27–56). If this was his original intention, it is a perplexing phenomenon that Masjid Menara Kudus is also the only mosque that has bravely incorporated the *candi* (temple) architecture for its minaret design, in a time when the minaret was not a norm for the Javanese mosque (Figure 1-19).

PHOTO CREDIT: ALI AKBAR

Figure 1-19 Masjid Menara Kudus *candi* architecture minaret design.

The lack of consistency and continuance in the employment of the Islamic calligraphy (and moreover the use of Arabic language) in any of the pre-20th century Islamic cultural heritage raised critical questions of the place of this distinguished Islamic art in the minds of local Muslims – especially seen in its glaring absence in mosques' ornamentations. Even in epitaphs, the employment of Arabic language ceased by the 17th century. According to Guillot, all the tombs found with Arabic calligraphy belonged to pre-16th century epitaphs. By the 17th century, a new pattern emerged in tomb engravings, employing "pseudo-calligraphy" through maintenance of the symbolic importance of the Arabic script by copying the decorative form while the letterings were completely illegible (Guillot, 2008, p. 236).

Here we come to a critical question that needs to be answered: "Are we confined, by our knowledge and training, to only accept things as being 'Islamic' based on our visual experience?" Are the visual qualities we see in Island Southeast Asia considered "less Islamic" based on the lack of reference to mainland Islam art characteristics, or is our judgement based on the qualities outlined by the doctrines of Islam, the *Qūr'ān* and the *Ḥadīth*? Does parallelism with the art products of mainland Islam make the regional architecture more Islamic than its ancestral heritage?

To date, as far as this research is informed, there has never been any substantial discussion taking place about the qualities expected of the Islamic products of this region. There has been an almost total neglect, as well as indifference, in identifying what are the distinguishing qualities that define Island Southeast Asian's Islamic material culture. From the outset, it seems that any sort of contradictions have already been resolved in recent years, vouchsafed by the blanket use of the word 'Islamic' itself, and all the peculiar elements associated with Islamic architecture derived from centuries of experimentations in the vast Islamic lands.

1.4 Does Morphology of the Mosque Indicate the Change in Islamic Thinking?

By the turn of the 19th century, the popularity of the Javanese model began to decline progressively. Although it did not abruptly disappear from the architectural contour, symptoms of change in stylistic preferences were initially detected in new ruling centres such as Pulau Pinang, Jakarta (Batavia), Ipoh, Pulau Penyengat and Johor Bahru.

In these centres, mosques were not only built using completely different materials, they were also constructed in a different style altogether. In Pulau Pinang, Masjid Lebuh Acheh (b. 1792–1808) displayed both European and 'Islamic' influences in the use of its architectural elements. There are at least three types of arches employed: horse-shoe, pointed and multi-foil arches. The verandas surrounding the main prayer hall are also supported by massive octagonal classical columns with pedestals (Figure 1-20).

Figure 1-20 Masjid Lebuh Acheh (b. 1792–1808).

Masjid Langgar Tinggi (b. 1829) in Jakarta, for example, is a two-storey building with cement-rendered brick walls and gambrel Dutch roof. It is a narrow rectangular building, with the lower ground used for shop-lots and the upper level dedicated for the prayer hall (Figure 1-21).

Figure 1-21 Masjid Langgar Tinggi (b. 1829) in Jakarta.

In Pulau Penyengat, an outstanding small yellow mosque could be seen as one sails from Bintan towards the island. This mosque, Masjid Pulau Penyengat (b. 1832), incorporated four minarets and thirteen domes (Figure 1-22).

Figure 1-22 Masjid Pulau Penyengat, the yellow mosque.

In Ipoh, the first mosque built for the Malay community therein exhibits European and South Indian influences. Masjid Panglima Kinta (originally named Masjid Tengah) (b. 1898) incorporates horseshoe arches sitting on straight piers. The most outstanding features of this mosque are perhaps the crenelated parapets with horizontal bands and octagonal based pointed minarets at the corners. A bulbous dome decorates the entrance portal, concealing perhaps an older pyramidal roof structure (Figure 1-23).

Figure 1-23 Masjid Panglima Kinta (b. 1898).

At the turn of the 20th century, Masjid Sultan Abu Bakar in Johor Bahru was completed (b. 1893–1900). Located on the hill named Bukit Kechil, this mosque boasts neoclassical influence with its grand size, fluted classical columns forming arcades with Victorian-style embellishments. Its stylistic preference marked a complete departure from local building tradition (Figure 1-24).

Figure 1-24 Masjid Sultan Abu Bakar in Johor Bahru.

The change in the mosque's idiom coincided with major socio-economic and political changes taking place in the region. From the early 17th century, the Dutch and English had begun to encroach upon the indigenous political and economic settings. Their intrusions disrupted economic opportunities for native Muslim rulers and their subjects. In their attempt to have total control of the spice trade, the Dutch in Batavia, for example, were not hesitant to enforce a policy of power and violence (Roelofsz, 1962, pp. 229–32). Armed confrontation, economical restraints and political unrest effectively precluded initiation of major building programmes among the Muslim communities and consequently affected the formation of sustained Islamic building culture.

By the last quarter of the 18th century, the balance of power has finally shifted from the local rulers to the hands of the Dutch and the English. Through various negotiated agreements with or imposed upon local rulers, all the major cities fell under the control of these Europeans. The discovery of new economies initiated a big influx of foreign immigrants to the region. Under the colonial rule, foreign workers, especially from mainland China, were brought in to replace local labour force. During *Verenigde Oost-Indische Compagnie* (VOC) administration in Batavia and Semarang, they were

more comfortable engaging Chinese carpenters and brick masons for building works than they were employing indigenous labourers (Salmon & Lombard, 1985, p. 175).

In the Malay Peninsula, for example, the creation of new town centres as a result of tin mining and rubber plantation activities resulted in a change in the demography pattern. The arrival of imported goods and Chinese artisans effectively destroyed indigenous crafts. Ambrose Rathborne wrote in *'Camping and Tramping in Malaya: Fifteen Years Pioneering in the Native States of the Malay Peninsula'*[12] that occupations that traditionally were dominated by the Malays (such as silversmiths, blacksmiths and carpenters) '[were] fast being superseded by Chinese' (cited in Gullick, 1958, p.162). By the turn of the 20th century, according to Annual Report Kedah (1906–1908), carpentry and bricklaying were almost entirely controlled by Chinese workers (Gullick, 1958, p. 162–3). As a result, a shift in the economic pattern was witnessed by the late 19th century, when new bureaucratic order was in place.

The development of crafts demanded that the building programme continued without interruption, and an integrated style had time to emerge (Hillenbrand, 1988, p. 3). Building development requires stability in political and social conditions to ensure extensive continuum of time and space. In addition, it also relies heavily on financial support to ensure high quality of execution of materials and techniques. In many cases, the efforts of energetic patrons are critical in the management of crafts activities. Ibn Khaldun precisely captured the importance of political and economic stability for urban development when he wrote in the *Muqaddimah*:

> 'The monuments of a dynasty are its buildings and large edifices (*haykal*). They are proportionate to the original power of the dynasty. They can materialize only when they are many workers and united action and cooperation. When a dynasty is large and far-flung, with many provinces and subjects, workers are plentiful and can be brought from all sides and regions' (Ibn Khaldun 2005, p. 221).
>
> 'However the quality of (architects) differs in the different groups. It depends on the ruling dynasties and their power. We have stated before that the

[12] This book recorded Ambrose Rathborne's travelling and encounters in the western Malay states from around 1880 to 1895. Rathborne came to Malaya in 1880, and was in partnership with Thomas Heslop Hill, venturing in coffee estates of Sungei Ujong in Selangor in 1879, as well as building constructions. J.M. Gullick considers this book 'a readable and most informative book' of the developments in Malaya during that period (J.M.Gullick, A History of Kuala Lumpur (1857–1939), MBRAS Monograph No. 29, Selangor, 2000, pp. 71–2).

> perfection of the crafts depends on the perfection of sedentary culture and their extent (depends) on the number of those who demand them' (Ibn Khaldun 2005, p. 473).

In the same way that stone architecture of a grand scale was the product of the Hindu-Majapahit rule (which receded with the diminishing of its authority), the development of Islamic architecture is similarly dependent upon stable and sustained Islamic rule. In Island Southeast Asia, however, there has never been a strong Islamic ruling power that matched the capacity of early dynasties formed in mainland Arabia, North Africa or India.

Many of the sultanates, including the influential ones, were short-lived. The most dominant were Pasai-Aceh (13th–17th centuries), Demak-Mataram-Banten (16th–18th centuries), Bugis-Makasar (15th–17th centuries) and Ternate-Tidore (15th–17th centuries) (Ambary 2001, p. 243). By the 18th century, whatever was left from the Islamic sultanates had all been subdued by either the Dutch or the British.

While the 17th century marked stagnancy in mosque development, evident in the absence of important mosques built in this period (O'Neill, 1994, p. 237), the end of the 18th century, in contrast, marked a significant shift of paradigm in the mosque idioms of the region. Non-conventional designs began to appear in the major cities of the region. The effects of the shift in political and economic control on local artistic flavour were markedly evident in the 19th century, when building programmes were under the authority of the ruling colonial powers or sponsored by them.

The departure from vernacular architecture was more pronounced in the Malay Peninsula, especially in mosques built by distinguished community leaders, who were employed by the colonial administration. With exposure to foreign building technology and materials, the departure from inherited building tradition was abrupt; only to absorb Islamic idioms, which were not directly acquired through cultural or ideological linkage with mainstream Islam, but were made possible through the European experimentation on architectural grammar of Islamic buildings in colonised lands such as India. While it can be argued that the mosque morphology is a rational consequence of the material development and shift in economic patterns, one must really question if the changes also happened from within? Did the concept or the function of a mosque somehow changed in the minds of the Muslims?

1.5 Challenges in the Study of Mosques as Historical Artefacts

The mosques in Island Southeast Asia are valuable historical evidence left by the Islamisation process, as they are indicative of the establishment of Muslim populations in various parts of the region. However, studying them as historical artefacts is a challenge that should not be underestimated. The sheer scale of the *Dunia Melayu* itself is an imposing factor in a systematic study of the Islamic heritage of the region. Denys Lombard in the first chapter of *Nusa Jawa*, under the heading of *Geo-historical Considerations*, emphasised the importance of grasping the actual scale of *Dunia Melayu* in any historical analysis when he wrote:

> 'The area covered by Indonesia reached 1,900,000 km2 or approximately 57 times the size of Holland, five times the size of Japan, nearly four times the size of France, two times Pakistan and almost half the size of India. From the east to the west, the Indonesian archipelago spreads over 5000 km, and approximately 2000 km from north to south….The distance from Aceh, which is located on the most western end of the archipelago, to the east of Irian Jaya; is the same as the distance from Portugal to Ural or the coastal line of Pacific Ocean to the shores of Atlantic Ocean in United States of America' (Lombard, 2000a, p. 12).

Despite being the home to the largest Muslim population in the world, until recently only a few scholars have endeavoured doing research in Islamic architectural history or archaeology. Apart from the fact that the history of Islamisation of the region is obscured by a lack of historical and archaeological data, the study on mosques as archaeological evidence has been inconsistent and lacks a methodological approach.

The small number of scholars undertaking Islamic archaeology research is also attributed to the educational programmes that existed in the colonial period. In Indonesia, for example, the archaeological studies are divided into three main periods: prehistoric, classical and Islamic archaeology (Tjandrasasmita, 2000a, p. 3). The volume of studies undertaken in the Indonesian prehistoric and classical (Hindu) periods way surpassed the studies done on historical relics of the Islamic period.

It was only at the beginning of the 20th century that systematic attempts to record Islamic historical artefacts were initiated with the establishment of *Dinas Purbakala* (Department of Antiquity) in 1913. This has now been split into two departments: *Pusat Penelitian Arkeologi Nasional* (National Centre for Archaeological Research) and

Direktorat Perlindungan dan Pembinaan Peninggalan Sejarah dan Purbakala (The Directorate for Protection and Development of Historical Heritage and Antiquities). In the 1960s the field of Islamic archaeology began to pick up momentum with the establishment of *Fakultas Sastra Universitas Indonesia* (Faculty of Literature, University of Indonesia) and *Fakultas Sastra dan Kebudayaan Universitas Gadjah Mada* (Faculty of Literature and Culture, Gadjah Mada University). Other than the limited archaeological reports produced, publications of an academic nature are rare (Tjandrasasmita, 2000a, p. 12).

In other parts of *Dunia Melayu,* however, the study of archaeology is generally still in its infancy. In Singapore, interest in archaeology was sparked by the discovery of Fort Canning Hill in 1984 by Dr. John Miksic, who was then attached to Gadjah Mada University (*www.seaarchaeology.com*). In Malaysia, the discipline of Islamic archaeology does not even exist. The most relevant programme that carries out methodological measured drawings of selected old mosques in Malaysia is pioneered by *KALAM*, a Malay acronym for Universiti Teknologi Malaysia's *Research Centre for Built Environment of the Malay World*. From time to time, *KALAM* produces publications in the form of small books and monographs containing visual data of selected Muslim architecture, mainly within the Malay Peninsula. These publications, although valuable given such a vacuum in the Islamic archaeological field in Malaysia, are based on students' assignments and mainly contain architectural drawings lacking crucial scientific data required for historical research.

Universiti Sains Malaysia has a *Centre for Global Archaeological Research*, which is an expansion of a core multi-disciplinary group of scholars involved in the archaeological research of prehistoric Lenggong site in Perak, but does not include any research on the Islamic periods (*www.arkeologi.usm.my*). The lack of focused Islamic archaeological study is also evident in the absence of specialised undergraduate or postgraduate programmes tailored for the studies of Islamic artefacts in the universities in Malaysia.

The main challenge in studying Islamic archaeology lies in the reliability of its sources. Historical perceptions of the nature of Islamic civilisation in the region are dominated by the antithesis of academic debates surrounding the origin of Islamic propagation efforts. Contradictions arise due to the veracity of sources from within and outside of *Dunia Melayu*, and how these sources in turn depict the characteristics of

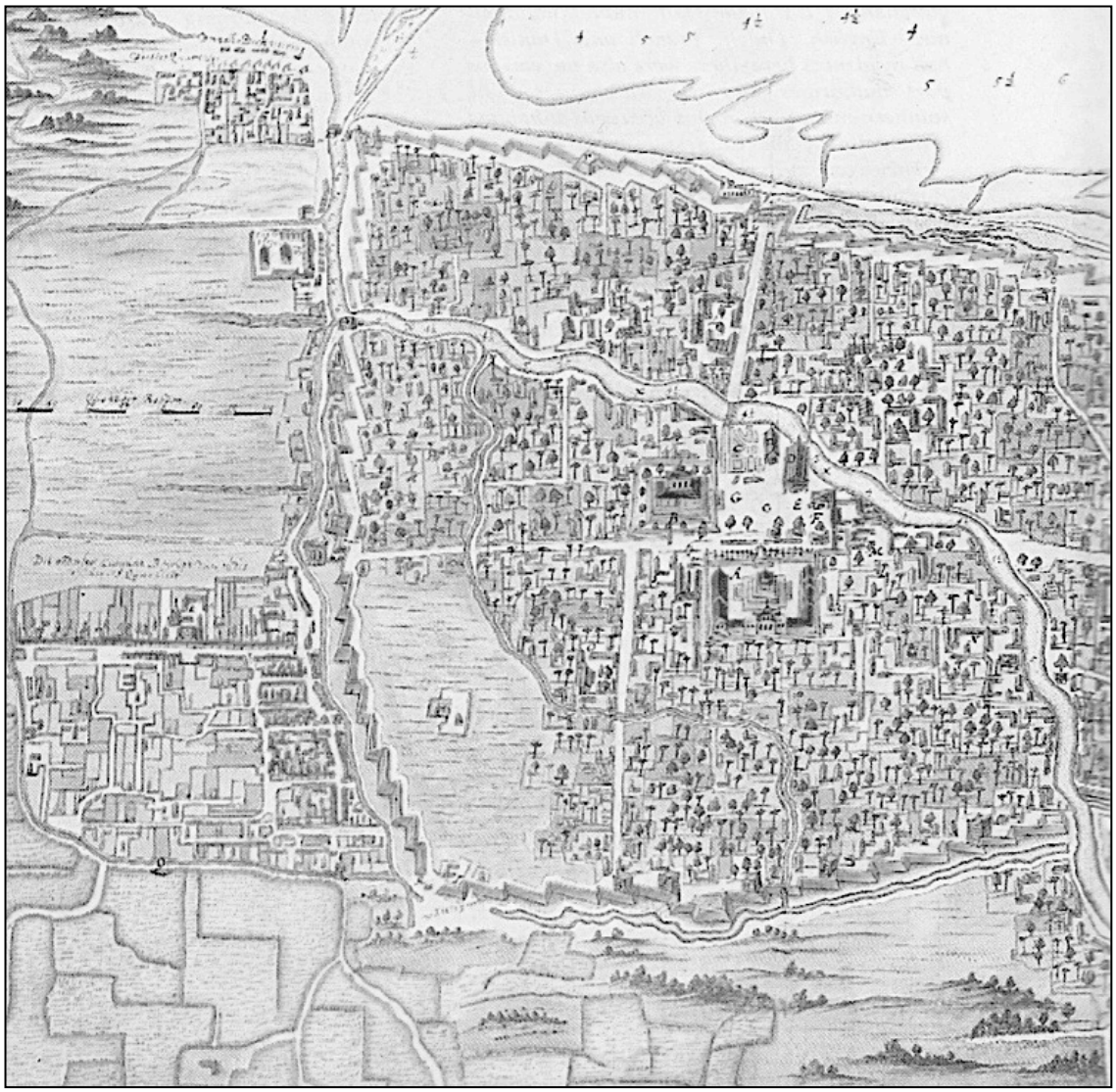
Islamic practices within the region, inclusive of its building culture. Most of the historical sources from within *Dunia Melayu* are typically interwoven with supernatural events or accounts of individuals with mystical powers.

For example, the Bantanese chronicle (*Sajarah Banten*) records how Hasanudin took possession of the old capital Banten Girang; and how his father Sunan Jati instructed the son to move the capital closer to the shores, despite the fact that the land near the shores was arid and the whole water channel system had to be constructed in order to supply clean water to the palace complex. It was in the *paseban* (public square) that Betara Guru Jampang, a pious man, meditated on a flat regular stone called *watu gigilang* (the luminous stone) in a motionless state so that birds came to nest in his *ketu* (head dress of religious men). Upon his conversion to Islam, Betara Guru Jampang disappeared. This *watu gigilang* was considered so sacred by Sunan Gunung Jati that he warned his son against displacing the stone, as this action would cause the fall of the kingdom. The antiquity of this *watu gigilang*, according to Guillot, is certified. Similar stones were known to be used as thrones of the Javanese kings and were referred to in a *mandala* of the Rajapatigundala, a Javanese text that goes back to the second half of the 13th century (Guillot, 1993b, pp. 90–1).

Uka Tjandrasasmita, in his research on Masjid Sendang Duwur, found a copy of a manuscript written in Javanese with Arabic characters *(pegon)* which suggested that the mosque originally came from Mantingan and was brought to its current site on the hill by Sunan Sendang in one night. According to the manuscript, due to the supernatural power possessed by Sunan Sendang, he was able to have the mosque – given to him by Ratu Kalinyamat – flown over from Mantingan and placed on the Tunon Hill (Sendang Duwur). The date of the event was recorded in the chronogram *"gunaning salira tirta hayu"* or 1483 Saka (Javanese calendar), which is equivalent to 1561 C.E. Although the veracity of such stories could be questioned, archaeological studies done on both the monuments in Sendang Duwur and Mantingan certified the similarities in architecture and decorative arts (Tjandrasasmita, 1984, p. 32).

Such narration styles are common in *Dunia Melayu's* historical *babads* or manuscripts. The founding of Melaka in *Sejarah Melayu*, the construction of Masjid Agung Demak in one night (Ashadi, 2006, pp. 23–24) and the sacral nature of *soko tatal* (main pillars made of laminated pieces) of Masjid Agung Demak, which, if removed, are said to have the power to cause calamities (Lombard, 2000a, p. 131), are among a

few of the supernatural incidents related to the founding of palaces and mosques. Despite the lack of crucial records pertaining to the inception or development of the historical relics and sites, the narrations of the chronicles serve as important indicators on the perception of the people in *Dunia Melayu* with regards to holy sites and revered individuals.



EDITED FROM (GUILLOT, 1993B)

Map 1-4. 16th century Banten city's map. The mosque's minaret is not seen.

In reviewing available textual data, the information acquired from travellers' accounts provided valuable descriptions of the place, the buildings, societal structures and customs at the time of the visits. Cornelis de Houtman, who led the Dutch voyage to Banten between 1595 and 1597 in his *"De Eerste Schipvaart der Nederlanders Naar Oost-Indie"* described in detail the layout of the city, the placement of the palace, the royal square, the mosque, the gateways, the port with its trades, the markets, the city forts and the people's settlements This report was equipped with sketches of Banten city, its markets and art display (Map 1-4) (Mundardjito, Ambary, & Djafar, 1976, p. 21; Tjandrasasmita, 2000a, p. 36).

Information on the changes to the Banten's Sultanate mosque, *Masjid Agung Banten,* was also retrieved from various travellers' reports. According to Guillot, the mosque, which was described by Bogaert in his 17th century voyage, could not have dated earlier than 1615, as an Englishman, Th. Elkington, reported that it had collapsed during the night of August 13 to 14 that year due to lightning (Guillot, 1993a, pp. 89–113).

Bogaert's description of the mosque in *Historische Reizen door d'oostersche Deelen van Asia* (Amsterdam 1711) corresponds fairly well to the existing structure of the mosque today, as he explained:

> 'The temple is almost square and built with large beams that are found in abundance on Java. Its roof is in the shape of a tower… It has five roofs, one on top of another; the first and largest one covering the body of the temple; the next ones are smaller and smaller that the last one almost comes to a point. In its centre, is raised a high which forms a real peak' (cited in Guillot, 1993b, p. 99).

The description of the mosque's minaret, however, was not found in either Elkington or Bogaert's accounts; nor did it appear in the sketches done by Cornelis de Houtman in 1595. Stavorinus was the first to mention it in *Voyage par le Cap* (1769) when he said clearly: '…there is, near the mosque, a narrow tower, but quite high, which serves the same functions as the minarets in Turkey' (Guillot, 1993a, pp. 89–113).

A map held in the *Bibliotheque Nationale* in Paris dated probably at the beginning of the 1670s clearly shows the minaret's position near the mosque. Francois Valentijn, when passing Banten in 1694, also mentioned, 'a stone tower seen from far and wide' (Guillot, 1993a, p. 97). These accounts matched the widely held belief that

the tower was built in 1620 by Cek Ban Cut, thereby confirming the archaeological data that the minaret was probably constructed in the first half of the 17th century (Mundardjito et al., 1976, p. 41).

To date, chronological analysis of the mosques' developments in Island Southeast Asia has been minimal. The absence of such critical knowledge, according to Indonesian Islamic archaeologist Hasan Ambary, is attributed to several factors. The most important factors are the absence of intensive and continuous studies of the artistic products during the Islamic period, the non-permanent nature of Islamic arts in the region (which resulted in the truncation of its artistic tradition) and the lack of variation and types in what was considered to be Islamic arts of the region. These factors have consequently contributed to the lack of interest in classifying Islamic relics based on chronological order (Ambary, 2001, p. 193).

The study finds that the loss of critical historical data in Islamic monuments was mainly attributed to the destruction of unrecorded heritage, or radical renovation performed on a particular building, to the extent that many ancient aspects of the buildings were completely replaced with new materials. The lack of attention given to the Islamic material culture contributed to poor data management. More important than the loss of physical data was the diminishing of evidence related to the people's culture and civilisation, which were recorded in the material culture. The ignorance of one's cultural tradition contributes to the uprooting of valuable cultural characteristics connected to his or her identity, thereby paving the way to the 'colonisation of culture'[13]. Lombard, in his observation on the effects of colonisation on the Javanese people, accurately stated that among the type of arts that was most neglected, and thereby highly affected by the colonial influence, was architecture (Lombard, 2000b, p. 178).

[13] *Colonisation of culture*: A term used by Uka Tjandrasasmita in an interview carried out during the fieldtrip in August 2007 when he spoke of social erosion as the result of colonisation of culture.

1.6 Research Problems

The present study embodies a much delayed and neglected area of inquiry pertaining to the formation of Islamic architecture in Island Southeast Asia, aptly represented by the mosque. Primary factors impeding the progress of such study have largely been underlined in the section prior to this (1.5 *Challenges in the Study of Mosques as Historical Artefacts*). As our knowledge on the process of Islamisation of the region remains scanty and obscure, the lack of corroborative data has denied us the most basic information on the factors responsible for the formation of this important Muslim material culture.

As Islam exists as a definable, cross-culturally applicable entity, the mosques are expected to exhibit certain types of material culture specific to the faith while at the same time generating a peculiar language consistent with the requirements of place and time. Therefore, the main aim of this research is to study the mosque as an immovable cultural property belonging to the Muslims in Island Southeast Asia. This statement in itself implies the existence of several suppositions.

The first assumption is that the Muslims shared, more or less, a common culture borne out of their adherence to Islam. Notwithstanding that each cultural group has its own cultural heritage, the people's acceptance of Islam will produce a distinctive culture, based on their absorption of the Islamic ideas (which were originally foreign to them, then consequently modified and eliminated), adopting features that at the end moulded their own cultural traits (Grunebaum, 1959, p. 1). Therefore, regardless of the people's cultural background, given that the Muslims in Island Southeast Asia shared several common themes as earlier discussed, the mosque is expected to exhibit distinctive and definable architectural vocabularies specifically related to them.

The second assumption is that the mosque, as an immovable cultural property, captures the spirit of its time. It will display what Jean Sauvaget referred to as 'the unconscious against the conscious' (cited in Grabar, 1973, p. 14) (i.e., information embedded within its material culture pertaining to the technologies available during its time, as well as the level of expertise and workmanship).

These components of the material culture could have been available locally, or they could have been 'made available' through a capable and powerful patronage (Ibn Khaldun, 2005, p. 221). Therefore, irrespective of how little information we get from documentary evidence, the mosque as material evidence will inform us on the design thinking that was prevalent during its formation, the capability of its patron and the place of Islam in the thinking of the people responsible for the mosque design.

From the beginning, this study has argued that modern national boundaries are artificial lines for pre-modern Island Southeast Asian people, as they hinder us from seeing the integral connections highly responsible for the peculiar characteristics evident in the people's culture and belief system. As such, it is imperative at the initial stage to put aside the pre-imposed borders and treat *Dunia Melayu* as one unit, as implied by the term. In order to get the mosques to inform us about their history, arranging them in chronological order is perceived as a crucial step. Here, however, the problem begins.

The study originally intended to collect data from mosques built between the 15th and 18th centuries. The 15th century was selected as the beginning period for investigation as it recorded the establishment of many Muslim sultanates. In addition, the earliest surviving mosques of the region belong to this period. The 18th century, as many authors have agreed[14], was the watershed in the history of *Dunia Melayu* that marked the beginning of European political interference in regional affairs. As such, it is critical to study the effects of this leap in history on the architectural vocabulary of this region.

However, preliminary study revealed that most of the mosques built in the selected time span are distributed in pre-modern Indonesia. Not only are they scattered all around the islands, they were all built in the exact replica of the Javanese model, thus giving the impression that there was never any kind of development at all from the

[14] See, among others, Barbara and Leonard Andaya in *A history of Malaysia* (1982), Ricklefs in *A history of modern Indonesia since c. 1200* (2001), *Mystic Synthesis in Java* (2003) and *Polarising Javanese society* (2007); Steinberg (editor) in *In search of Southeast Asia* (1987), Khoo Kay Kim in *Malay society 1874-1920* (1974), *Malay society: transformation and democratisation* (2001); Anthony Reid in *Charting the shape of early modern Southeast Asia* (2000), Roelofsz in *Asian trade and European influence in the Indonesian Archipelago* (1962).

model found in the 15th century[15]. Therefore, any attempt to organize them into chronological order is almost a fruitless endeavour, as we are faced with repetitions of data, despite the mosques being located in different places.

Nos	REGION	CITY	NAME	YEAR	REMARKS	
					Src	Cnd
1	Banten	Banten Lama	Agung Banten	1556	√	▲
2			Kasunyatan	16c	√	▲
3			Kaibon	16c	√	◊
4			Pekojan	16c	√	◊
5			Pacinan Tinggi	16c	√	◊
6			Kanari	16c	√	▲
7	West Java	Cirebon	Agung Kasepuhan	16c	√	▲
8			Sunan Gunung Jati	1542	○	▲
9			Panjunan	16c	√	▲
10		Jakarta/Batavia	Cilincing	16c	○	▲
11			Marunda	16c	○	▲
13			Al-Makmur	17c	√	▼
14			Salafiyah	1620	○	◘
15			AnNawier	1760	√	▼
16			Angke	1761	○	▲
17			Krukut	1785	○	◘
18			Kebon Jeruk	1786	√	▼
19			Langgar Tinggi	1833	√	▲
20			Al-Mansur	1717	√	▲
21			Kampung Baru	1748	√	▲
22	Central Java	Demak	Agung Demak	15c	√	▲
23		Kudus	Menara Kudus	1537	√	▲
24			Sunan Kalijaga	1533	○	▲
25		Jepara	Mantingan	1559	√	▲
26		Rembang	Agung Rembang	1884	√	◘
27	East Java	Tuban	Agung Tuban	1894	√	◘
28		Lamongan	Sendang Duwur	1561	√	▲
29		Gresik	Sunan Giri (old)	15c	√	○
30			Sunan Giri (new)	18c	√	▲
31			Sunan Drajat	15c	√	◘
32		Surabaya	Masjid Rahmat	15c	√	◘
33			Sunan Ampel	15c	√	▲
34	Yogyakarta	Yogyakarta	Besar Kotagede	16c	○	▲
35			Soko Tunggal	18c	√	▲
36			Agung Surakarta	19c	√	▲
37			Makam Bayat	17c	○	▲
38			Pajimatan	16c	○	▲
39			Banyu Sumurep	17c	○	▲
40			Agung Yogyakarta	1773	√	▲
41			Watu/ Selo	1787	○	▲
42			Girilaya	1788	○	▲
43			Gedhe Kauman	18c	○	▲
44	Riau	Tanjung Pinang	Sultan Riau, Penyengat	19c	√	▲
45		Pekanbaru	Senapelan (Siak-Indrapuri)	18c	○	▲
46		Indragiri Hilir	Raya al-Huda Tembilahan	?	○	▲
47			Tuan Guru Shekh Abdurrahman Siddiq	?	○	▲
48	Sumatera	Aceh	Indrapuri	14c	○	▲
49			Raya Baiturrahman	18c	○	▲
50		Palembang	Masjid Agung Palembang	18c	○	▲
51			Osmani	19c	○	▲
52			Jamik Ismailiyah	1884	○	▲
53			Azizi	1902	○	▲
54			Sheikh Burhanuddin	18c	○	▲
55			Keramat Kototua	20c	○	▲
56			Pondok Tinggi	1874	○	▲

[15] With the exceptions of a few, of which some have been included in the final list of mosques for detailed study.

Nos	REGION	CITY	NAME	YEAR	REMARKS	
					Src	Cnd
57	Kalimantan	Pontianak	Jami' Sultan Abdurrahman	19c	○	NI
58			Jamiatul Khair Keraton	?	○	NI
59		Agam	Jami' Agung Bingkudu Canding	19c	○	NI
60			Jamik Kerajaan Selimbau	17c	○	NI
61			Jamik Kerajaan Nanga Bunut	17–18c	○	NI
62			Jami' Keraton Landan	1899	○	NI
63			Jami' Sultan Nata	1672	○	NI
64			Kesultanan Sambas	1885	○	▲
65			Pusaka	1850	○	▲
66			Amuntai	1875	○	▲
67			Su'ada	c.1920	○	▲
68			Kiai Gede	19c	○	▲
69			Shirotul Mustaqim	1891	○	▲
70			Kasimuddin	c.1920	○	▲
71	Nusa Tenggara		Bayan Beleq	16c	○	▲
72			Pujut	16c	○	▲
73			Rambitan	17c	○	▲
74			Raudhatul Muttaqin	18c	○	▲
75			At-Taqwa	17c	○	▲
76	Sulawesi		Palopo	17c	○	▲
77			Bungku	c.1835	○	▲
78	Maluku		Ternate	1610	○	▲
79	Irian Jaya		Patinburak	1870	○	▲
80	South Thailand	Patani	Teluk Manok	18c	○	▲
81			Surau Aur	18c	○	▲
82	Malay Peninsula	Melaka	Tengkera	1780	√	▲
83			Kampung Hulu	1728	√	▲
84			Kampung Keling	1748	√	▲
85			Pulau Duyong	18c	√	▲
86		Johor	Sultan Abu Bakar	1894	√	▲
87		Perak	Sultan Idris Shah	20c	√	▲
88			Indian Mosque	1904	√	▲
89			Ubudiah	1914	√	▲
90			Paloh	1912	√	▲
91			Melayu Lama	20c	○	▲
92			Papan	20c	○	▲
93			Jami' Tanjung Rambutan	20c	√	▼
94			Bota Kanan	20c	√	▲
95			Batak Rabit	1885	√	▲
96			Panglima Kinta	1898	√	▲
97			Al-Ihtidaiyah	20c	√	▼
98		Kedah	Zahir	1912	√	▲
99			Surau Tok Janggut, Langgar	20c	√	▲
100		Pulau Pinang	Lebuh Acheh	1808	√	▲
101			Kapitan Keling	1918	√	◘
102		Terengganu	Pulai Condong	19c	√	▲
103		Kelantan	Langgar	1870	√	▲
104			Kampung Laut	1730s	√	▼

○ Literature/Archival Studies

√ Field trip

◘ Completely new

◊ In ruins

▲ Original form retained

▼ Extensively modified but original form traced

NI Not enough information

Table 1-1 Preliminary List: Distributions of mosques according to region.

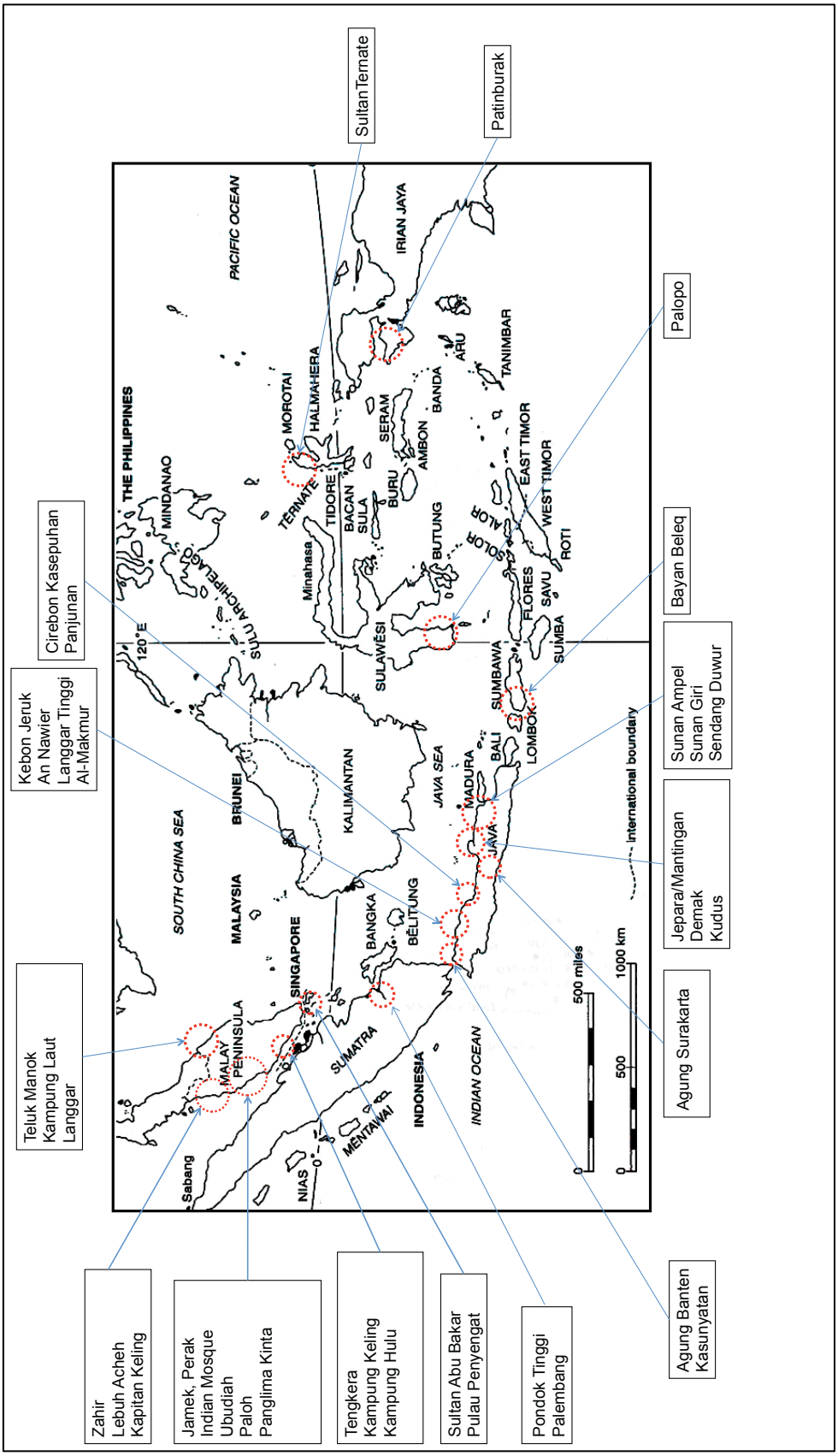
In order to get a variation of data, as well as a fair coverage of other mosques in the region, the period of study was extended to include mosques built in the first half of the 20th century – prior to the formation of nation states (See Table 1-1). The period selected (i.e., the 15th century through the 20th century) is a huge time span in itself, and thus requires samples to be short-listed only after the process of filtering. In addition, it is necessary to define the limits of material under discussion by adopting a suitable methodology.

Here we are faced with practical problems in connection to the accessibility of the samples themselves. In some cases, the physical remoteness of the mosque samples and bureaucratic procedures serve as deterrents. In the period of conducting the field trip, the initial plan to include some of the most important mosques (or important sites) had to be abandoned. For example, the area south of Thailand, which was the site for the Sultanate of Patani, comprising Narathiwat and Yala, became physically isolated due to on-going civil war. Similarly, none of the mosques in Kalimantan were visited, as during the period of field trip there was no direct international connection between Kuala Lumpur and Samarinda[16].

Even in the mosques that the researcher was able to visit, such as Masjid Kebon Jeruk, Jakarta (b. 1786–1797), entry was not allowed by the *Jama'ah Tabligh* movement, who controlled the mosque. Only men (who were members of this group) were given permission to use this mosque. Similarly, access to the tomb of Sunan Sendang Duwur, in the compound of Masjid Sendang Duwur, was denied, as entry was only allowed for people who came for the intention of paying tribute (i.e. *ziyarah*)[17].

[16] In 2008, just as the researcher began to make plans to travel to Samarinda using Air Asia, the airway company decided to terminate all direct flights from Kuala Lumpur to Samarinda. The other alternative was to fly to Jakarta, and from Jakarta take the local inter-island flights, which proved to be more expensive.

[17] See also Uka Tjandrasamita (1988) on this issue.



Map 1-5 List of mosque sample according to geographical location.

As it is critical that the study covers the whole of the *Dunia Melayu* in order to get a complete picture, the exercise of gathering information from a variety of sources was a taxing and cumbersome procedure. The experience of conducting field study revealed the practical difficulty in compiling even the simplest information on the surviving mosques. Much of the information sometimes was only available locally, either in the hands of local individuals or in the archives of local institutions, such as in the administration office of the mosque itself. In many cases, there was no documentary evidence found whatsoever. The challenge in synthesizing data from arrays of information gathered through field trips, archival studies and literature reviews was overwhelming, especially in the instance where direct information was not readily available.

Oleg Grabar had forewarned us of the complexity of this stage when he stated, "…there is a practical problem of dealing with a considerable and immensely varied documentation about the arts, or finding a common denominator for them" (Grabar, 1973, p. 15). However, it is a challenge that must be overcome as "only through some organized correlation between a mass of diverse kinds of documents could the art of early Islamic times and the formation of Islamic art be understood, in fact, even identified" (Grabar, 1973, p. 14).

The first phase involved looking for extant mosques in the traditional port cities of Island Southeast Asia following the routes of Islamisation. The mosques were selected based either on their architectural merits or historical significance. In doing so, the significance of the location of the mosque is also critical to our study, regardless of whether the mosque selected was architecturally outstanding or otherwise. Finally, based on accumulated data retrieved from field trips and archival study, a list of selected mosque samples was finally established. (See Map 1-5 ,Table 1-2 and 1-3.)

NOS	REGION	NAME OF MOSQUE	DATE FIRST BUILT			SOURCE
			15–16	17–18	19–20	
1	East Java	Sunan Ampel	1			√
2	East Java	Sendang Duwur	1			√
3	East Java	Sunan Giri	1			√
4	Central Java	Mantingan	1			√
5	Central Java	Kudus	1			√
6	Central Java	Demak	1			√
7	West Java	Agung Banten	1			√
8	West Java	Cirebon Kasepuhan	1			√
9	West Java	Panjunan	1			√
10	Batavia/Jakarta	Kebon Jeruk		1		√
11	Batavia/Jakarta	An-Nawier		1		√
12	Batavia/Jakarta	Langgar Tinggi			1	√
13	Batavia/Jakarta	Al-Makmur Cikini			1	√
14	Batavia/Jakarta	Al-Mansur		1		√
15	Batavia/Jakarta	Kg Baru		1		√
16	Surakarta	Agung Surakarta			1	√
17	Kalimantan	Pusaka			1	○
18	Sumatera	Azizi			1	○
19	Sumatera	Pondok Tinggi			1	○
20	Riau	Pulau Penyengat			1	√
21	Nusa Tenggara	Bayan Beleq	1			○
22	Nusa Tenggara	At-Taqwa		1		○
23	Sulawesi	Palopo		1		○
24	Irian Jaya	Patinburak			1	○
25	Patani	Teluk Manok		1		○
26	Malay Peninsula	Tengkera		1		√
27	Malay Peninsula	Kg Hulu		1		√
28	Malay Peninsula	Kg Laut		1		√
29	Malay Peninsula	Kg Keling		1		√
30	Malay Peninsula	Lebuh Acheh			1	√
31	Malay Peninsula	Sultan Abu Bakar			1	√
32	Malay Peninsula	India Perak			1	√
33	Malay Peninsula	Zahir			1	√
34	Malay Peninsula	Ubudiah			1	√
35	Malay Peninsula	Paloh			1	√
36	Malay Peninsula	Kapitan Keling			1	√
37	Malay Peninsula	Batak Rabit			1	√
38	Malay Peninsula	Surau Tok Janggut			1	√
39	Malay Peninsula	Panglima Kinta			1	√
40	North Maluku	Sultan Ternate		1		√
41	Malay Peninsula	Langgar Kelantan			1	√
	TOTAL: 41		**10**	**12**	**19**	

O LITERATURE/ARCHIVAL STUDIES √ FIELD TRIP

Table 1-2 List of selected mosques to be studied.

1.7 Research Objectives, Questions and Methodology

The original word for mosque is *masjid* (Arabic), derived from the Arabic letters س ج د (s-j-d), which means a place for prostration[18]. However, from the technical and architectural perspective, a mosque is "a wall correctly orientated towards the *qibla*, namely *Ka'ba* within the *Masjid al-Haram*, Mecca (Makkah)[19]" (Hillenbrand, 1994, p. 31). The evolution of a mosque into a complex architectural product that Hillenbrand considered as 'the Islamic building *par excellence'* (Hillenbrand, 1994, 31), however took decades if not centuries of development before it acquired all the familiar architectural elements such as the *qibla wall*, *mimbar*, *mihrab*, minaret, courtyard, ablution fountain and *dikka* (in some regions) (Frishman & Khan, 1994, pp. 32–41).

Given the simple definitions of the mosque, both from linguistic and architectural aspects, this study aspires to understand how the architectural language of mosques in Island Southeast Asia evolved. While Hillenbrand considered the birth of Islamic art to have begun with the Umayyad dynasty (661–750), where the outstanding Great Mosque of Damascus (b. 709–15) took its form less than a century after the death of the Prophet *ṣallallahi 'alayhi wasallam*[20] (d. 632), this study attempts to find the genesis of this art in the context of Island Southeast Asia. As the oldest extant mosque known of this region was built in the 15th century (i.e., eight centuries after the foundation of the Great Mosque of Damascus, and in the same period that witnessed the establishment of the last Islamic dynasty, the Ottomans in Turkey), it is critical to understand why the earliest mosque in Island Southeast Asia took the form that it had, and how this form was later transformed into a completely different model.

Inherent in this inquiry is the question of what proportion did Islam take as a defining factor in the local Islamic architectural vocabularies? In Oleg Grabar's definition of Islamic art[21], he identified the two critical components of the art: local

[18] Prayer in Islam constitutes the act of prostrating. For further elaboration on the etymological aspect of the word, please refer to Chapter 3.

[19] In the present study, the author uses Makkah instead of Mecca.

[20] Salutation for the Prophet (peace be upon him). Hereafter (S).

[21] Refer to discussions in Chapter 1.3

tradition and Islamic culture. The symbiosis between these two elements therefore becomes the focus of this study, as it is imperative to understand factors responsible for the formation of the Islamic art of this region. Consequently, the study also intends to find design parameters in the Island Southeast Asian mosque that qualifies it to be considered as an Islamic edifice, both from functional and formal (architectural) aspects. Based on this adopted terminology, the research aspires to seek answers to the following questions:

- How is Islamic architecture defined through the mosque in the context of Island Southeast Asia?
- What are the design parameters employed in a mosque that express its "Islamic" characteristics? Are these design parameters derived from the *Qur'an* and the *Sunnah*?
- Did Muslims in Island Southeast Asia arrive at a design solution by looking at available examples, either from local tradition or from other parts of the Muslim world, especially from regions that were culturally dominant?
- How did the Muslims in Island Southeast Asia translate the functional concept of a mosque – as understood in Islamic thinking – into a physical model? How do they compare to the types found in the Middle East during the time of the Prophet (S) and after his death?
- What was considered original in the context of Island Southeast Asia and what was considered adoption or imitation?
- What is the role of culture in Islamic thinking? Is there a conflict between cultural and Islamic requirements in a mosque design?
- Given the above, is there a particular Island Southeast Asia mosque type that adequately meets the religious and cultural requirements? Is there a clear typology for mosques in Island Southeast Asia?

PERIOD	REF	NOS	REGION	CITY	MOSQUES
15TH–16TH CENTURY	1	1	East Java	Surabaya (Ampel)	Sunan Ampel
	2	2	East Java	Lamongan	Sendang Duwur
	3	3	East Java	Giri (Gresik)	Sunan Giri
	4	4	Central Java	Mantingan (Jepara)	Mantingan
	5	5	Central Java	Kudus	Kudus
	6	6	Central Java	Demak	Demak
	7	7	West Java	Banten	Agung Banten
	8	8	West Java	Cirebon	Cirebon Kasepuhan
	9	9	West Java	Cirebon	Panjunan
	21	10	Nusa Tenggara	Lombok	Bayan Beleq
17TH–18TH CENTURY	10	11	Batavia/Jakarta	North Jakarta	Kebon Jeruk
	11	12	Batavia/Jakarta	West Jakarta	An-Nawier
	14	13	Batavia/Jakarta	West Jakarta	Al-Mansur
	15	14	Batavia/Jakarta	West Jakarta	Kg Baru
	22	15	Nusa Tenggara	East Nusa Tenggara	At-Taqwa
	23	16	Sulawesi	South Sulawesi	Palopo
	25	17	South Thailand	Patani	Teluk Manok
	26	18	Malay Peninsula	Melaka	Tengkera
	27	19	Malay Peninsula	Melaka	Kg Hulu
	28	20	Malay Peninsula	Kelantan	Kg Laut
	29	21	Malay Peninsula	Melaka	Kg Keling
	40	22	North Maluku	North Maluku	Masjid Sultan Ternate
19TH–20TH CENTURY	12	23	Batavia/Jakarta	West Jakarta	Langgar Tinggi
	13	24	Batavia/Jakarta	Cikini	Al-Makmur Cikini
	16	25	Surakarta	Surakarta	Agung Surakarta
	17	26	Kalimantan	South Kalimantan	Pusaka
	18	27	Sumatera	Tanjung Pura	Azizi
	19	28	Sumatera	Jambi	Pondok Tinggi
	20	29	Riau	Penyengat Island	Pulau Penyengat
	24	30	Irian Jaya	Fak-fak	Patinburak
	30	31	Malay Peninsula	Pulau Pinang	Lebuh Acheh
	31	32	Malay Peninsula	Johor	Sultan Abu Bakar
	32	33	Malay Peninsula	Perak	India Perak
	33	34	Malay Peninsula	Kedah	Zahir
	34	35	Malay Peninsula	Perak	Ubudiah
	35	36	Malay Peninsula	Perak	Paloh
	36	37	Malay Peninsula	Pulau Pinang	Kapitan Keling
	37	38	Malay Peninsula	Perak	Batak Rabit
	38	39	Malay Peninsula	Kedah	Surau Tok Janggut
	39	40	Malay Peninsula	Perak	Panglima Kinta
	41	41	Malay Peninsula	Kelantan	Langgar Kelantan

Table 1-3 List of mosques according to foundation date and location.

In order to evaluate the mosque in a methodological manner, this study has adopted the typological approach as a research method. As the mosque is a distinguished type of architecture, subjecting it to typological inquiries will provide critical information that will contribute to theory building.

'Type' derives from the Greek word *typos* and carries wide-ranging meanings, among them 'model,' 'matrix' and 'impression' (Leupen, 1993, p. 133). In his entry "Architecture" of *Encyclopedie methodique*, Quatremère de Quincy (1755–1849) defined 'type' as presenting 'less the image of a thing to copy or imitate completely than the *idea* of an element which ought itself to serve as a rule for the model.' Quatremère thus distinguishes between 'type' and 'model' by defining 'model' as "an object that should be repeated as it is" (cited in Leupen, 1993, p. 133). In Quatremère's definition, 'type' therefore is conceived as the result of a long tradition, which is susceptible to change and developments (Leupen, 1993, p. 134).

While Quatremère connects 'type' to 'idea,' Rafael Moneo (1978, p. 23) connects the 'idea' to 'formal structure' by defining 'type' as 'a group of objects characterized by the same formal structure.' By 'formal structure,' Moneo proposes that objects can be grouped 'by certain inherent structural similarities,' which were not only limited to 'simple abstract geometry' but 'also intimately connected with reality – with a vast hierarchy of concerns running from social activity to building construction'. This means '…that buildings also have a precise position in history' (Moneo, 1978, pp. 23–4).

The definitions above provide us with a conceptual platform from which the idea of 'type' can be related to the mosque, and how the mosque should proportionally be studied. However, there exists a practical challenge in analysing the mosque as a distinctive type. Oleg Grabar poses some critical questions to elucidate this challenge:

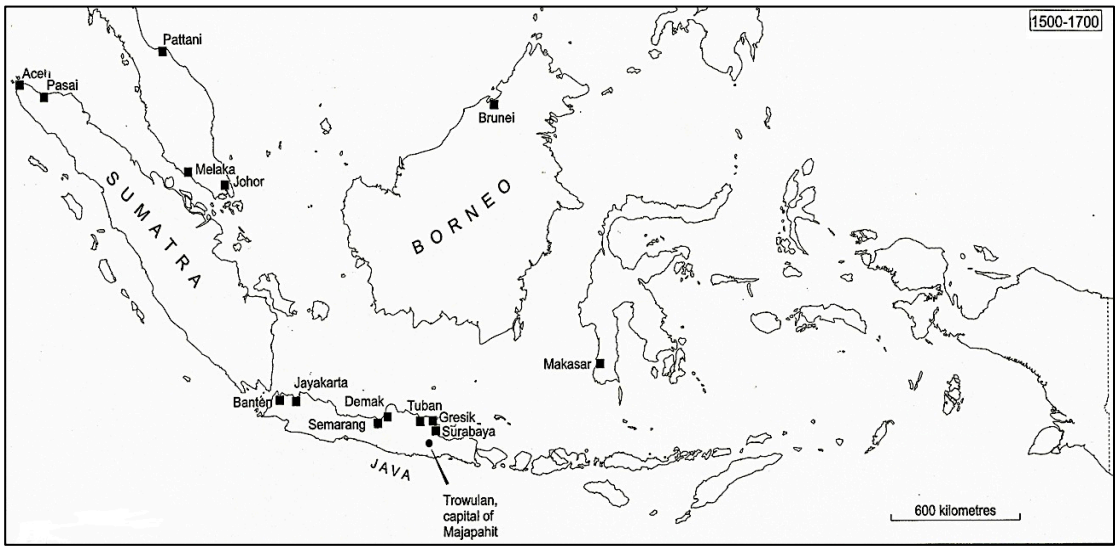
> Should we think that similar functions automatically created similar forms in different parts of the Muslim world? Or should we rather imagine that there was a type – in the technical sense of the word, a standard with variations – which was independent of any specific land but was tied to the needs of the faith alone and to the mind of the faithful?...Should their history be written from monument to monument set in chronological sequence, as has been done in many basic manuals such as Creswell's monumental Early Muslim Architecture? Or should it accord to some underlying idea about forms and purposes which transcend individual monuments? (Grabar,1973, p. 16).

Robert Hillenbrand (1960), in discussing some of the popular approaches, issued caveats on limitations of some of these methods. The first approach is to cut across regional and temporal boundaries in order to isolate significant variants of mosque designs and trace their developments. The second approach is what he termed as 'statistical approach' (i.e., by chronicling all known mosques to discover the types and distribution of the most popular varieties). This method allows systematic charting of changes in order to understand the pattern emerging from specific type and retrieve design parameters. In both of these approaches, there is a risk of undermining regional factors, as mosques are studied mainly for their formal and formative aspects. The third approach is to identify those mosque types that are most distinctive of a given area and period, then describing their constituent features. This approach, however, focuses on the outstanding and ignores the less attractive mosques, thus risking a possible bias in describing the features of Islamic art of the area or period (EI2, vol. 6, pp. 677–678).

Typologies are complex theoretical statements that should be subjected to quantitative modelling and rigorous empirical testing (Doty & Glick, 1994, p. 231). Within design discipline, the use of typology study stems from the need to analyse and discuss the existing architectural products (analytical typology), as well as to base possible design decisions on design experiences of a specific type (generative typology) (Leupen, 1997, pp. 132–9). While analytical typology provides a mechanism by which various elements of a building can be described in relation to their whole design composition, the generative typology allows the generation of a set of principles relating

to the design of the specific type that will contribute to possible design decisions (Leupen, 1997, p. 132).

In order to prevent the typological study from being a mere taxonomy exercise, this research has taken several precautionary steps. The methodology described below is specifically designed for this project through studying the various typology theories and methods presented. The mosques were initially selected based on their age and significance of place. The parameter for evaluating "significance of place" was determined by preliminary historical studies conducted on the major cities of Island Southeast Asia. Initially following the routes of Islamisation, the most important centres between the 15th and the 20th centuries were selected (see Map 1-6).



SOURCE: (CRIBBS, 2000)

Map 1-6 Major urban centres, 16th and 17th centuries.

Then a survey on extant mosques was conducted on each region. By arranging them in chronological order, the earliest extant mosques of each city were identified. Only mosques that displayed distinguishing features, either due to age or architectural characteristic, were chosen. Therefore, Brunei, for example, is not included in the list, as there is no record of surviving mosques prior to the 20th century, despite Kota Batu being an early Islamic centre in the 16th century (Adnan, 2001, pp. 12–9). The final selection of the mosques involved detailed scrutiny of their features to ensure that the final list contained sufficient and non-repetitive data that could be evaluated objectively.

The next stage is divided into two parts. The first part involves precise description of the architectural features of each selected mosque. This is made possible

through the use of a "Building Survey" form that the researcher has designed to record a brief history of the mosque pertaining to its foundation, as well as its site placement, building elements, material technology and architectural influences, etc. (see Appendix).

While the building survey will provide explanations on the physical attributes of the individual building, the main objective of carrying out this exercise is to introduce various 'typological levels,' thus describing new 'ranks' of types (Moneo, 1978, p. 23). By subjecting each mosque to the same physical survey, i.e. analytical typological method (Leupen, 1997, p. 131), the 'type' design features and its building elements can be classified into different clusters. Then, depending on the inquiry to establish the presence of different ranks within the type, information retrieved from each selected cluster can be populated in order to acquire statistical data (Hillenbrand, 1960, p. 677).

The outcome expected is the emergence of specific mosque types, defined by the emerging pattern populated from the typological levels (see Chapter 5 for detailed analysis). This approach allows "new naming" of the "rank," thus distinguishing different ranks existing within the same typology. In the context of Island Southeast Asian mosques, this is an important step, as no prior study has been conducted establishing the existence of the mosque types and the various ranks based on physical evaluations of the mosque.

The second part involves historical studies on the significance of the periods of investigation to the selected mosques. The aim of this exercise is to look for factors that may or may not be directly responsible for the formation of the mosque idioms. The selected mosques are arranged according to chronological periods, which the present study has determined can be classified into three distinctive eras: 15th–16th century, 17th–18th century, and 19th–20th century. The justifications for arranging the mosque samples into three periodic clusters are described below.

Based on historical survey of the region, there seems to be major movements considered as watersheds in the history of Island Southeast Asian, which in turn were responsible for dictating the socio-economic and political history of the region. These broad historical movements were put side by side with the mosques arranged in chronological order, and immediately a peculiar trend began to emerge, although nothing in detail was known at the initial stage.

As evident from previous discussions, the 15th and 16th centuries were intense periods in the efforts of Islamic proselytization. These periods witnessed the formation of new Islamic centres in the major port cities of the archipelago. Among them were Aceh (1400), Melaka (1410), Patani (1520), Banten (1525), Cirebon (1525), Demak (1480), Gresik (1410), Brunei (1500), South Sulawesi (1580), Ternate (1460) and Sulu (1460) (Reid, 2000, pp. 27–8). Correspondingly, the earliest mosques of the region were identified in these cities (10 of them, with the exception of Masjid Bayan Beleq), sharing similar architectural vocabularies despite being in different locations. Consequently, a majority of these mosques were also built either by the early Muslim missions (namely the *wali)* or influential rulers.

While the 15th and 16th century period marked the emergence of leading commercial centres and their intense involvement in the world economy, the middle of the 17th century witnessed their declination and retreat from it (Reid, 1988, pp. 267–70). Among the major movements of this period was the increased presence of European trading companies and their escalating interference in local politics. The most dominant power during this period was the Dutch, represented by VOC, which was formed in 1602 (Reid, 1988, p. 273). Through a series of military operations marked with extreme use of force, the Dutch were able to secure their position in important centres of the region. In 1605, they expelled the Portuguese from Ambon and successfully controlled the cloves trade.

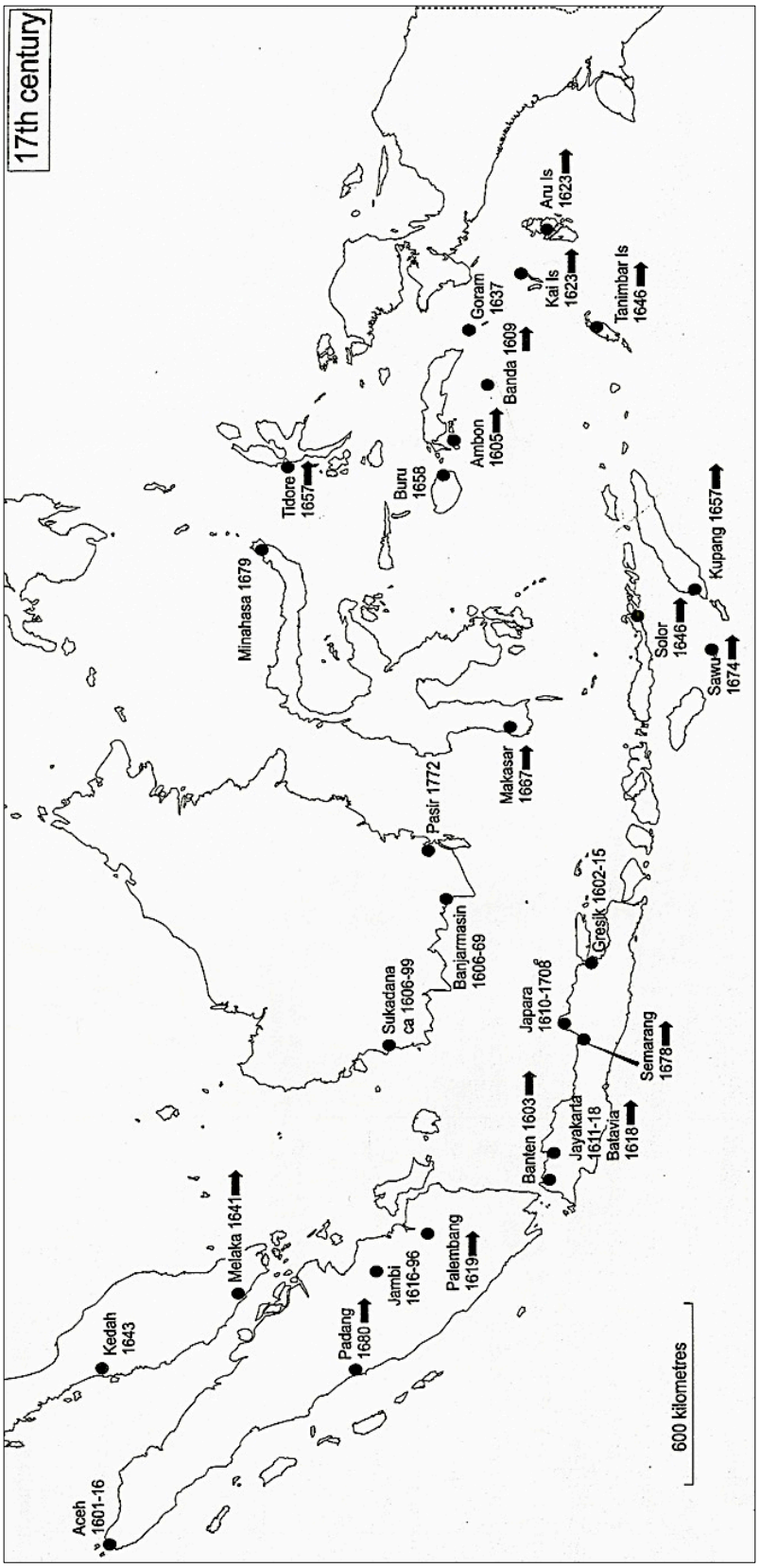
In 1619, under the instruction of Jan Pieterszoon Coen, the newly appointed Governor-General of Batavia, VOC burned most of Jepara and destroyed its port. In the same year, a fierce battle took place in Banten, with the Dutch against the English and the Sultan of Banten. Banten was burned down and the whole population was expelled. In 1629, the most influential rulers remaining, Sultan Iskandar Muda (Aceh) (d. 1636) and Sultan Agung (Mataram) (r. 1613–1645), both suffered defeat at the hands of the Dutch. Other important port cities fell one by one to the Dutch VOC: Ternate (1620s), Melaka (1641), Makassar (1669) and Banten (1683)[22].

[22] Most of the information given here is mainly extracted from Anthony Reid (1988), "Southeast Asia in the Age of Commerce," pp. 236–81; and Meilink-Roelofsz (1962), "Asian Trade" pp. 191–203.

The intense period of military operations and political manoeuvres of the 17th century persisted into the 18th century, only to consolidate the Dutch's grip on the region (Map 1-7). While the English East India Company had virtually no territorial possession in Southeast Asia, by the middle of this century, the Dutch were considered "lord of [Java] with its several millions inhabitants," to the effect that VOC was "transforming itself into a territorial rather than a naval power" (Steinberg, 1971, pp. 57–8). While the Dutch were increasingly drawn into the political affairs of the archipelagos, the most widespread and important trading groups of this century were the Chinese merchants (Steinberg, 1971, p. 58), who had a cultural and historical advantage over the Europeans (Roelfsz, 1962, pp. 239–68).

The major movements in the 17th and 18th centuries coincided with the building patterns of these periods. In the 17th century, very few mosques were built, and they were found scattered in different places in the archipelago. These mosques are Masjid At-Taqwa (Nusa Tenggara), Masjid Palopo (Sulawesi) and Masjid Sultan Ternate (North Maluku). With the exception of Masjid Sultan Ternate, all other mosques were small community mosques.

The pattern persisted into the next century, when all of the 18th century mosques were community mosques and none of them were built by sultans or *walis*. Astoundingly, it was only in this period that the earliest mosques began to emerge on the Malay Peninsula, noticeably in Melaka, where all of these mosques were built by the Dutch for community groups living in the city. Coincidentally, the three Melakan mosques selected for study exhibited Chinese craftsmanship in their building decoration. This period also manifested the earliest evidence of Europeans' participation in financing mosque projects.



SOURCE: (CRIBB, 2000)

Map 1-7 Major VOC ports and forts in the archipelago, 17th century.

The 19th century marked the beginning of modification from traditional mosque designs as discussed in section 1.4. It also corresponds to the critical stages that would seal the permanent divisions of the Island Southeast Asia into modern nation states (Andaya & Andaya, 1982, pp. 114–204; Ricklefs, 2007, p. 12; Steinberg, 1987, pp. 139–59). Apart from using bricks to replace wood as the main construction material, the mosques of this period also emerged in new architectural idioms employing arches, domes and massive classical columns.

Despite the material changes, mosque ornamentation was still at a minimum for the mosques of the 19th century, compared to mosques built in the next century. Not only were the latter more luxurious in material finishes and craftsmanship, they began to introduce variants in floor plan and basic spatial arrangement. The emergence of these variants was more dominant on the Malay Peninsula, especially noticeable in newly created town centres under the British administration.

Based on this preliminary analysis, studying the mosques by classifying them into three broad categories (15th–16th century, 17th–18th century, and 19th–20th century), will enable the research to capture decisive moments and factors influencing the mosque idioms. If we grant the mosque the assumption that the intelligibility of its structure will provide the much needed information not available from textual evidence, extracting data by carrying out detailed physical analyses will unravel the conscious and unconscious principles of the mosque[23], thus explain the material and aesthetic culture of each selected period.

The final list of mosques selected for study (Table 1-2) is initially drawn by choosing mosques from distinguished towns across the archipelago, to ensure we have a fair coverage of all the regions. However, to understand the development and morphology of these mosques, emphasis is given to listing them based on chronological order (Table 1-3), rather than putting them in their regional context. By doing so, the formal changes of the mosques across the region will be able to be recorded. The merit of such an approach is that the changes that occurred in a certain period can be compared to other periods. If a certain trend or pattern is detected, or in the absence of

[23] Conscious and unconscious principles as discussed in Section 1.6. See Oleg Grabar (1973), *The Formation of Islamic Art*, pp. 16–7.

any pattern whatsoever, then detailed inquiry will be performed on the period selected by evaluating local factors causing the emergence of that pattern.

In order to execute this methodology successfully, mosques were carefully selected based on the parameters discussed. The outcome of the analyses on these mosques must be able to satisfy three criteria, as adopted from Oleg Grabar's *The Formation of Islamic Art* (1973). First, the finding must be able to explain a sufficiently high number of perceptible phenomena without being compelled to explain them all; second, it has to be meaningful both in terms of individual monuments and their wider historical setting; and third, it leads to further explanations and opens up venues for further research in the area (Grabar, 1973, p. 17).

1.8 Theoretical Orientation

As a building belonging to the religious architecture category, the mosque exhibits a range of structural elements that distinguish it from other building types. Most characteristic among them are the minaret and the dome. However, these elements, which are characteristic of today's mosques, were absent in the Prophet's Mosque, nor were they present in the time of the *Khālifāh al-Rāshidūn* (r. 632–61 C.E.).

Although most scholars acknowledge that the origin of the mosque is found in the Prophet's Mosque (Hillenbrand, 1994, p. 33; Pedersen, 1960, p. 648; Farid Shafi'ī, 1970, pp. 195–6), very little study has been done on how present mosques developed from this embryotic model. Fewer yet have ever attempted to investigate how the Prophet's Mosque conforms to the Islamic doctrines, and if its final form emerged due to compliance to the divine revelation as outlined in the *Qūr'ān* and the *Sūnnāh*, or if it was merely a cultural (i.e., Arabic) product.

There are a few factors that have contributed to the lack of study on the Prophet's Mosque. The first, perhaps, is the fact that the most outstanding feature of this edifice is its primitive characteristic. Its columns were made from stems of palm trees, with roofs made of palm leaves and clay, while the walls were built with *labin* (sun-baked bricks) (Pedersen, 1960, p. 646). From a design perspective, the physical conditions of this first mosque seems to confirm Creswell's conclusion of the 'architectural vacuum' prevalent in the early years of Islam (Creswell, 1969, pp. 6–16). As a consequence, there is a general trend to bypass this paradigmatic mosque, as it is of little value in providing references for the mosque architectural quality.

In contrast, however, significant emphasis is given to the study of a great number of mosques across the Islamic world. Despite the prevalence of the courtyard model in the mosques of the Umayyad in Damascus (r. 661–750), 'Abbasids in Bahgdad (r. 750–1260) through to the Umayyads in Spain (r. 711–1031) and the Mughal in India, little is known about why the Prophet's model has left a profound impact on them.

Secondly, worship in Islam does not require the existence of specific edifices (Hillenbrand, 1994, p. 31, Pedersen, 1960, p. 645, Grabar, 1973, p. 105). This is evident from the Muslims' practice in the early years of Islam, when prayers could be done in

an alley (Ibn Hisham, pp. 159, 166), a corner of a house (Ibn Hisham, pp. 202–3) or in an open space such as a courtyard (Ibn Hisham, p. 246; al-Bukhari, *Salat*). The Prophet's *hadith*, "The whole earth is made a *masjid* for me" (al-Bukhari) also seems to support this notion. The lack of prescription in the *Qūr'ān* for a specially designated building contrasts the detailed nature with which ritual obligations are meticulously outlined, posing a valid question of whether a mosque is ever a religious or liturgical product (Grabar, 1969, pp. 26–46).

Essential to this inquiry is how the Islamic ideology, as presented in its *fiqh* (jurisprudence) pertaining to the acts of worship, is expressed in the Prophet's Mosque. As the Prophet (S) is a messenger of Islam, and as his actions and words are all dictated by the divine revelation *"Wā ma yānthīqū 'ān al-hāwa, in hūwā illa wāhyu yuha"* (Nor does he speak of his own desire; it is only an inspiration that is inspired) (*Qūr'ān* 53:3–4), the equation suggests that the Prophet's Mosque is a divinely inspired structure, which deserves further scrutiny.

This being said, the primary objective of such an inquiry is not to uncover how mosques were developed from the Prophet's Mosque prototype. The aim is to understand the elemental features of the Prophet's Mosque and how they relate to the Islamic ideology. Finding correlations between these two aspects is critical, as it will provide the present study with the required parameters for defining the properties of Islamic architecture. This information, in turn, will be the knowledge base from which the mosques in Island Southeast Asia will be evaluated.

In addition, understanding the Prophet's Mosque is a prerequisite to using typology as a research approach. According to Doty and Glick (1994), every typological study must be based on a certain 'ideal type,' as a controlling factor in determining the level of changes made to the models under study. From this aspect, by using the Prophet's Mosque as the ideal type, level of changes (i.e., variations to the ideal type) occurring in the mosque samples can be recorded and evaluated.

This methodology allows generation of useful metaphors and insights of emerging patterns, which in return cater to the development of specific theories or ideas that can be used to examine these patterns. The outcome of the study is expected to provide alternative visual or perceptual models, experience, or thought systems pertaining to the mosque; thus expanding the limitations of existing knowledge. In order

to achieve these objectives, two sets of knowledge are required. First, Islamic concepts regarding the mosque will be discussed in detail in Chapter 3. Second, architecture as the knowledge base to analyse the design aspects, material and aesthetics of mosques is selected for analysis.

1.9 Thesis Structure

The thesis is divided into two parts, with each part compiled in different volumes. The first part, in Volume 1, is comprised of four chapters. This volume sets out the research orientation by presenting its research background, theoretical orientation and a descriptive catalogue of selected mosques for analysis. Chapter 1 deals with the idea of the mosque as an expression of the Islamic civilisation in Island Southeast Asia by exploring elements responsible for the formation of Islamic idiom in the mosque architecture. Chapter 2 reviews available literature on the topics of mosques in Island Southeast Asia, while at the same time briefly comparing the focus of local study and the general methodologies often conducted on the Islamic architecture of mainland Islam. Chapter 3 discusses the conception of a mosque from the Islamic perspective, by referring to the *Qur'ān* and the *Sunnah* of the Prophet Muhammad (S). In this chapter, an analytical study on the Prophet's Mosque is carried out in order to extract the underlying design intentions and applications. Chapter 4 consists of a descriptive catalogue of mosques selected for detailed analysis.

The second part, Volume 2, is comprised of four chapters. Chapter 5 is visual analysis and typological studies conducted on selected mosques. It systematically analyses the physical attributes of the mosque by studying its site layout, material and technological considerations, decorative elements and stylistic influence. The findings of this chapter are elaborated on in the remaining chapters. Chapter 6 elaborates on the typological ranks existing in the mosques analysed, while Chapter 7 looks at the impact of human agency on the mosque design. Chapter 8 concludes the study by highlighting the unique typology of the Island Southeast Asian mosque and underlining the factors affecting the transformation of mosque idioms in Island Southeast Asia.

1.10 Conclusion

The study is anchored upon the design principles found in the Prophet's Mosque as an archetype. The Prophet's Mosque is thereby treated as a stable premise consisting of fundamental parameters that generate a specific type of material culture unique to the Muslim people. The mosques' physical characteristics are studied and classified by breaking their physical characteristics into various typological levels. The embedded characteristics of each level are studied in order to elucidate design decision making factors. From the analysis, the mosques will be classified into clusters of mosques sharing similar formal structural, thereby producing new ranks within the type. By carrying out this process, the mosques in Island Southeast Asia can now be classified into different typologies, either based on form or function.

The findings are then compared to the design parameters extracted from the Prophet's Mosque. Similarities and variations will be discussed by placing the mosques within their social, geographical and cultural context. The emphasis will be upon interpretation of the material culture as a way of understanding the thinking of the Muslims of Island Southeast Asia in relation to the mosque as an expression of Islam.

2 CHAPTER 2: LITERATURE REVIEW

2.1 General Overview on the Studies of Mosques

Outside of Island Southeast Asia, there is a huge corpus of knowledge pertaining to the studies of mosques, usually recognised as a distinctive type within the Islamic architecture spectrum. An overview on the works of some of the distinguished scholars is briefly discussed here, primarily due to their contributions in providing intellectual frameworks in the study of the mosque.

Most remarkable is perhaps the pioneering work of K. A. C. Creswell in *Early Muslim Architecture* (1932–40). Creswell, who began his systematic recording in the 1920s, arranged the buildings in chronological order to elucidate the development of a specific type. Beginning with his studies on minarets first published in *The Burlington Magazine for Connoisseurs* (1926, vol. 48, No. 276, 279, 279), Creswell conducted a methodological study of early Islamic monuments, mainly in Cairo and elsewhere, such as Baghdad and Cordoba. His legacy is preserved in the form of a photographic archive belonging to the American University of Cairo (AUC) that stored over twelve thousand printed images of Islamic buildings, assembled primarily from his own work (O'Kane, 2009, p. ix).

Creswell's chronological analyses were primarily targeted at charting the change in idiomatic expressions rather than linking them to the inherent functions of the buildings. While his methodological approach provides critical information on the morphology of a building type, it is biased towards pure physical and stylistic analyses. This gulf between the study of the building form and its functions is filled by Robert Hillenbrand's *Islamic Architecture: Form, function and meaning* (1999). By arranging the selected monuments according to their building types, Hillenbrand's emphasis is towards highlighting each type's distinguishing characteristics through analyses of its functions (Hillenbrand, 1999, p. 1).

In the chapter on 'The Mosque', he analysed the various liturgical and socio-religious functions of the mosque, before describing the mosques according to their regional variations. The latter part consists of an architectural survey of mosques under various political patronages from Andalusia to Afghanistan, whereby he was able to

identify the distinguishing characteristics between Arab, Persian and Turkish prototypes (Hillenbrand, 1999, p. 66).

In *The Formation of Islamic Art*, Oleg Grabar (1973) opens up the discussion by posing several fundamental questions pertaining to methodologies adopted in this field of study. He initially raised the issue of terminology and what constitutes the phrase 'Islamic art', so as to establish the scope of inquiry (Grabar, 1973, pp. 1–6). He then explored the various technical challenges in organising the copious range of data and discussed some of the typological methods already employed by previous scholars.

Some of his insights were valuable and contributed significantly in shaping the inquiry framework of the present study. Ironically, in the specific chapter *Islamic Religious Art: The Mosque* (Grabar, 1973, pp. 99–131), references were limited to only two mosques: the Great Mosques of Damascus and Cordoba. Grabar's main concerns seemed to be focused on the origin of forms, and their associated functions and meanings to the Muslim society.

His academic inclination is evident in *Islamic Art and Beyond: Constructing the Study of Islamic Art* (2006). The focus of his inquiry is on the changes in Middle Eastern mosque architecture by analysing the evolution of the Islamic cities according to their historical periods. Elsewhere, Grabar continued his critical approach by questioning the changes in contemporary mosques today (Grabar, 2002, p. 245). According to him, the mosque has transformed from its traditional role as a community centre to become a more pious place than ever before, and in turn has become a place for imparting political slogans and propaganda.

Studies done by other scholars on the origins and developments of mosque elements are quite intensive, approaching them both from linguistic and historical perspectives while finding parallels in other cultures. Scholars like G. C. Miles (1949) in *Mihrab and 'Anazah* and R.B. Serjeant (1959) in *Mihrab* have looked into the origin and significance of the *mihrab*. K. A. C. Creswell (1926), Richard Gottheil (1910) and later Jonathan Bloom (1989) have looked into studies of the minaret. Wolfgang Born (1943) has also raised the issue of the origin of the dome in *The Origin and Distribution of Bulbous Dome*. Most of the writings on mosques by international scholars are based on Islamic architecture of the Middle East.

In looking at a methodological approach for the present study, a review of research done in South Asia was also performed. One of the most brilliant studies that has emerged in recent years is perhaps Alka Patel's research on building communities in Gujarat (Patel, 2004). The primary theme of Patel's study is the continuity of the ancient Maru-Gurjara building style into Islamic times. By combining architectural and epigraphic data, Patel's contribution is seen in the careful adoption of research methodology in approaching the issue of architecture and cultural history.

Other studies done on South Asia that provide a theoretical framework to the present study is Mehrdad Shokoohy's *Bhadresvar* (1988), where extant monuments from the Islamic period in Bhadresvar were studied, and *Muslim Architecture of South India* (2003), where he investigated the cultural connections of trading communities and their impact on the Muslim architecture of the Malabar and Coromandel Coasts.

Earlier studies on Island Southeast Asia mosques were mainly done by foreign scholars. Issues surrounding the origin of form were found to be central in many of these studies. H. J. De Graaf, in his '*De Oorsprong der Javanese Moskee*' (originally published 1947–1948), looked into the cultural connections between Indonesia and Southern Indian and suggested that the mosque forms were influenced by the mosque architecture in Malabar (Graaf, 1963). W. F. Stutterheim, in *'Cultuur Geschiedents van Indonesie, De Islam en Zijn Komst in III de Archipel*' (1952), was of the opinion that the mosque derived its form from *wantilan*, a cock-fighting arena that is only found in Bali (Sartono, Marwati, & Nugroho, 1977).

G. F. Pijper, however, believed that the form was a local product, as the Javanese people have long recognised the tiered roof form as representing the magical *Meru* mountain as the abode of the deities (Pijper, 1974). Not much interest is found in mosques outside of Java Island, or even outside of modern Indonesia, except a short article by R.A. Kern (1956) regarding the origin of the Malay *Surau*, which appeared in the journal of Royal Asiatic Society, as well as Bougas's article on the architecture of *Surau Aur* in Patani (Bougas, 1992).

One of the earliest books written on the mosques of this region is *Sedjarah Mesdjid,* by Aboebakar (1955). It was written at a time when Indonesia was defining its Islamic identity through the architectural representation of the Istiqlal Mosque, as evident in the thoughts of President Sukarno in his forwarding statements of the book

(Aboebakar, 1955, p. v). Although it incorporated brief descriptions of many mosques inside and outside of Indonesia, the propagandist notion of the work is evident in its attempt to draw parallels between Indonesian cultural heritage and other culturally advanced Islamic civilisations from mainland Islam.

By the last quarter of the 20th century, several studies on Islamic archaeology were credited to local scholars such as Uka Tjandrasasmita and Hasan Muarif Ambary. Tjandrasasmita's contribution in paving the way towards a methodological study of Islamic antiquities can be seen from his study on *Masjid Sendang Duwur* (Tjandrasasmita, 1984), which was considered to be the best complete report so far on an Islamic monument. His work was followed by Syafwandi in studying the minaret of *Kudus* for his Master degree thesis (Syafwandi, 1985). Syafwandi's report contained historical background of the mosque, archaeological reports and analysis based on measured drawings and scientific data collected.

Hasan Muarif Ambary's contributions were seen in many of the research analysis reports of Islamic relics, including aesthetic values found in epigraphic materials, tombs and mosques (Ambary, 1982b). His name appeared in almost every archaeological work that covered various places in Indonesia, such as the antiquities in Ternate (Ambary, 1980b) and various archaeological reports of Banten (Ambary, 1977, 1988; Mundardjito et al., 1976), Sumatra (Ambary, 1982a), Cirebon (Ambary, 1997), Kudus (Ambary, 1978) and pre-Islamic Srivijaya sites (Ambary, 1980a).

Other studies of an academic nature on Island Southeast Asia mosques were mainly found in the forms of postgraduate theses and journal publications. Zein Wiryoprawiro's book on the development of East Javanese mosques looked into the formation and functional aspects of selected East Javanese mosques (Wiryoprawiro, 1986).

The concern about idiomatic change in modern mosque architecture (mainly in Malaysia) is central to the studies done by Tajuddin Rasdi (Tajuddin Rasdi, n.d; M. Tajuddin Rasdi, 1996), the study on Javanese Mosque typology by Bambang Setia Budi (2006a) and the study of the continuity of pre-Islamic motifs in Javanese mosque ornamentation by H. S. Lee (2006) in her doctoral thesis. Studies regarding the origins of old mosque design were also prominent, such as the thesis of Ahmad E. I. Wahby (2007), who sought the impact Arab merchants had on the design of early Javanese

mosques and shrines; Denys Lombard's article on Chinese factors (Lombard & Salmon, 1993); and Handinoto and Samuel Hartono's propositions (Handinoto & Hartono, 2007).

Other works on mosques could be classified as containing general information and were mostly in the format of pictorial catalogues. Included in this category were the works of Abdul Halim Nasir (2004), which contained many samples of Island Southeast Asian mosques, but lacked much critical information regarding the historical and architectural aspects. Abdul Baqir's *Masjid-masjid Bersejarah di Indonesia* (Abdul Baqir, 1999) looked into the oldest surviving mosques in Indonesia based on region, but with minimal information on each mosque. Mohd Tajuddin Mohd Rasdi's books were mainly compiled from UTM students' measured drawing projects of selected mosques in Malaysia (Tajuddin Rasdi & Alice Sabrina, 2003; M. Tajuddin Rasdi, 1998, 1999, 2003) and Radzi Sapiee's *Rumah Azan*, which contained glossy pictures of selected mosques in Malaysia (Radzi Sapiee, 2009).

2.2 Prominent Themes in the Studies of Mosques in Island Southeast Asia

As is evident from prior discussions, despite the corpus of knowledge available on the subject of Islamic arts and architecture in general, literature focusing on mosque architecture in Island Southeast Asia is rare. In addition, many of the studies done on the mosque were carried out as academic exercises of local universities, either as an individual or group work. Thus, the information acquired from such studies is largely unavailable or unknown, due to the absence of reliable publication and distribution efforts. Much of what is gathered in the literature review stage is acquired from local sources written in Malay or Indonesian languages. A review of available literature on the subject matter gives a good insight into future works that need to be done in this field.

In order to avoid generalisation and ambiguity in regards to the subject matter, the literature review was conducted to look for the following discussions:

The origins of form

Study review on the influences manifested in mosque architecture and the Islamisation of form and meaning.

The development of mosque architecture

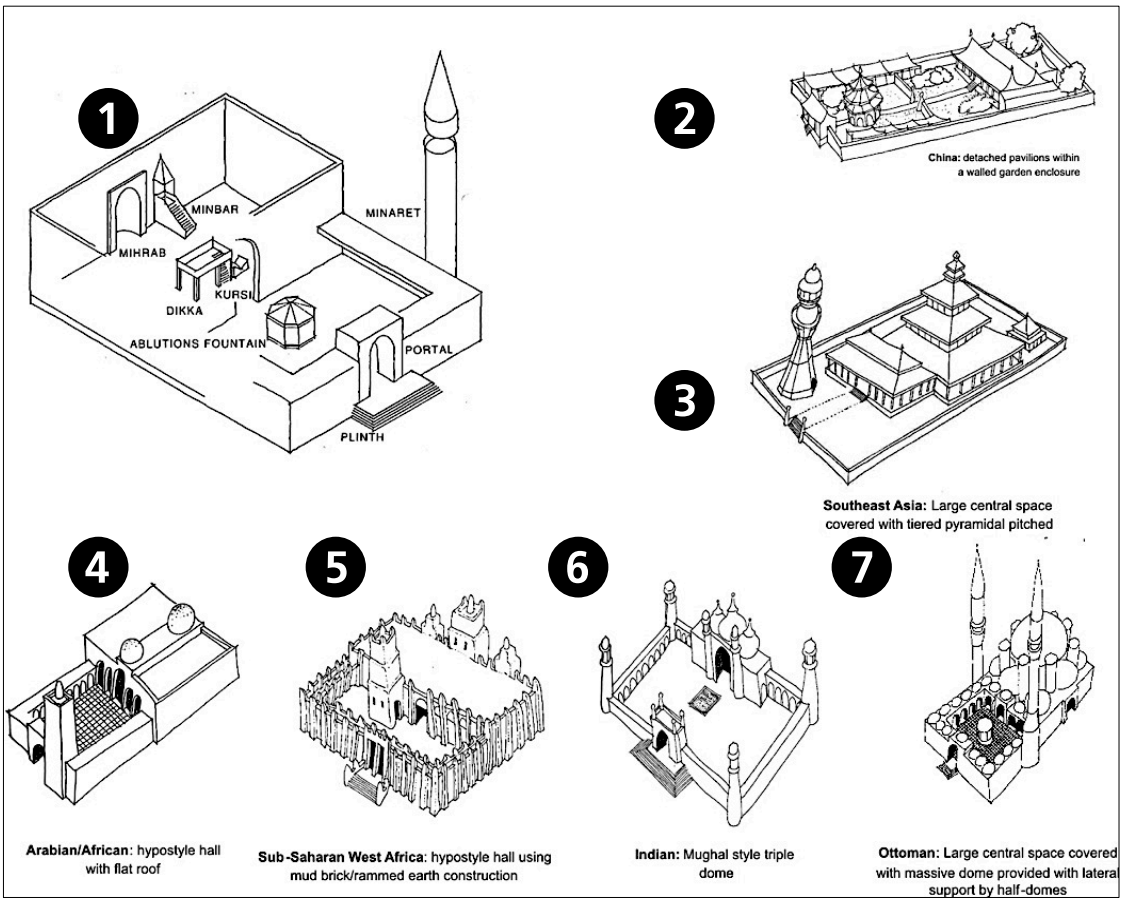
A review on how the migration from the pre-Islamic to Islamic period occurred, how much has been done in studying the changes in the architectural language and the factors affecting these changes.

Material and technological aspect

To review how architecture is affected by the availability of materials and technology, and what factors caused certain materials and technology to be preferred.

2.2.1 The Origins of Form

Most traditional mosques have pyramidal tiered roofs with square or rectangular plans. This model is prevalent in Island Southeast Asia to the extent that it is recognised as being the prototype of this region, despite the existence of other mosque forms (Frishman, Khan, & Mohammad, 1994) (Figure 2-1).



EDITED FROM (FRISHMAN & KHAN, 1994)

Legends

1. Basic mosque elements
2. Mosque in China
3. Mosque in Southeast Asia
4. Mosque in Arabia/Africa
5. Mosque in Sub-Saharan /West Africa
6. Mosque in India
7. Ottoman style mosque

Figure 2-1 Mosque typologies.

According to Prijotomo (1984), these forms are derived from the Javanese traditional architecture, which was heavily influenced by Hindu-Javanese worldviews. The fact that Islam does not dictate specific forms to represent its philosophies of life has encouraged the continuity of pre-Islamic forms and concepts embodied in art and architecture. Prijotomo, quoting the works of Anderson (1965) and Kartodirjo (1972), stressed that although the (Javanese) people's culture is formally Islamic, it is essentially shaped by many pre-Islamic elements. He further emphasised that even though the 'forms' of architecture in the Islamic period have been Islamicised – after adopting and adapting from the Hindu-Javanese form – their ideas were still very much rooted in Hindu-Javanese concepts (Prijotomo, 1984).

The form of the tiered pyramidal roofs was essentially derived from the pre-Islamic sacred monument concept of *Meru*. According to Hindu-Javanese ideas, *Meru* is the seat of the gods – it is the *centre* that stabilises the world of man, and where the vertical axis originated from the centre unifies all the forces in its infinite peak.

'The infinite is the Unity enclosing the Diversity, the Unity-in-Diversity…the centre becomes direct manifestation of the Infinite, the Supreme God. In this respect, the Mahameru is the Ultimate Center, the abode of the Supreme God, while man's creation of this center is a temporary abode of the God the Infiniti' (Prijotomo, 1984, p. 31).

The dual and the five-fold order systems in Hindu-Javanese architecture are interpreted as the interaction between the terrestrial and celestial forces (Prijotomo, 1984, p. 31). The temples and monuments in Java always carry these meanings in their forms and plans. The vertical subdivision is generally divided into three: base, body and crown. On plan, the temples, which were usually square-based, were also subdivided into three levels: *Kamadhatu, Rupadhatu* and *Aruphadu.* On all of these levels, vertical or in plan, there would be motifs and ornamentations carrying symbolic meanings (Kratz, 2002; Prijotomo, 1984, p. 32).

These mystical ideas found their place in Southeast Asian Muslims' worldview through Sufism. Acknowledging that such interpretation is not found from reading the Islamic sources (the *Qur'ān*), Prijotomo argued that the Sufis did not interpret Islam in a mystical way, but worked on emphasising the 'how' of the relationship between the Creator and the creation by interpreting the works of early Muslim scholars (among

others, Ibn ‘Arabi). In comparing the Hindu-Javanese organisational concepts with that of Islam, he argued that although the *Meru* shape was still retained in Javanese mosques, the emphasis was more on the centre – the *mihrab* – which he considered as the focus of architectural organisation in Islam (Prijotomo, 1984, p. 83).

However, despite the fact that the *Meru* shape resulted in the centralised plan that emphasised the centre, the focus was towards the apex, and not the centre (Prijotomo 1984, p. 84). To an extent, this concept echoes the significance of the *mihrab* in a mosque. Despite the *mihrab* being the centre of focus in a mosque, the emphasis is in directing the congregation towards the ultimate centre, which is the *Ka’aba*. From this perspective, according to Prijotomo, ‘the Hindu-Javanese forms were able to fulfil Islamic requirements for forms’ and ‘similarities in forms enabled the Javanese to read Islamic architecture in Hindu-Javanistic ways; conversely it was found easy for Javanese to adopt these Islamic ideas as “*Javanese*”’(Prijotomo, 1984, p. 85).

Abdullah Muhammad echoed the Muslims’ acceptance of the Hindu cosmology ideas through his interpretation of the motifs and architectural forms used in Malay mosques. The lotus, which clearly originated from Hindu-Buddhist ideas, was interpreted as The Creator and His Creations. He then elaborated on the philosophy of life originating from two levels: *Al-Martabatul Ilahiah* (Divine Level) and *Al-Martabatul Kauniah* (Universe Level). These two levels were further subdivided into seven subdivisions, which he then reapplied to the lotus motif.

In commenting on mosque architecture, he asserted that the mosque is like a universe carrying symbolic meanings (Abdullah, 1978, pp. 40–45). Its tiered pyramidal roof could be subdivided to carry different meanings according to its levels, with the highest peak being called *Tingkat Ahadiah* (Level of Oneness), where *Zat Allah* (God’s Divine Being) exists (unseen) next to *Haqiqat Muhammadiah* (The Manifested Muhammad) (Abdullah, 1978, pp. 42–43). In his writing, Abdullah Muhammad went further to apply these concepts to all tiered roofed mosques in his effort to accommodate these interpretations in relation to Islamic philosophies of life. However, due to the absence of convention in distinguishing between the forms and Islamic teachings, Abdullah’s writings left an impression that the interpreted meanings of mosques were imposed rather than based on academic reasoning.

Ismundar (1986) provided refreshing insights into the symbolism that exists in Javanese architecture. He carefully explained the meaning of the motifs in Javanese legends and the rituals of building a house – from cutting down the tree, choosing and preparing the site, and erecting the main column (*soko guru*) to decorative arts in wood carvings used in specific locations in the building. The *garuda,* for example, symbolised the protagonist of truth, strength, power and speed, while arrows symbolised protection. These two motifs were usually used around doors or windows to 'protect' the entrance of the building from external danger. When Islam came, the *garuda* motif became abstract, and the calligraphy of *Qur'ānic* verses was then added at the same locations. These motifs also served as ventilation panels for the walls (Ismundar, 1986).

The *Jago* (cock) symbolised credibility, and was usually made from ceramics and put on the rooftop. It was usually highly stylised, thus making it difficult to recognise. The Javanese used this as a good omen, hoping that the members of the household would be prominent society members (Ismundar, 1986, pp. 85–6). There are two types of *gunungan* (mounts): simple and stylised. The *Gunungan* symbolises greatness and is usually located on the rooftop; so is *mahkota* (crown), with the hope that the household will find peace and security (Ismundar, 1986, pp. 88–90). With the coming of Islam, the ancient motifs were used selectively, usually avoiding direct representation of living things while retaining similar customs to achieve blessings for the buildings.

The minaret was never part of early mosque architecture in the Malay world. According to Sumintardja, it was only introduced by the Arab immigrants in the 19th century (Sumintardja, 1981). Masjid Agung Demak, the oldest mosque in the Malay world, only had its minaret added in 1934 (Syafwandi, 1985). However, according to Syafwandi, Menara Kudus, which was similar in design with (temple) Candi Jago, was probably built between the 15th and 16th centuries, in the transition period from Hinduism to Islam (Syafwandi, 1985, pp. 46–7).

Domes became features of Island Southeast Asian mosques in the 19th century. Masjid Penyengat Riau was among the first to have a dome in the early 1800s. The rebuilding of Masjid Bait al-Rahman incorporated a dome into its design after being demolished by the Dutch in 1879 (M. Ichsan 2000, pp. 120–6) (M. Ichsan, 2000, pp. 120–126). The dome was completely alien to the regional architecture, but soon was accepted as a symbol of Islam. In Indonesia, small prefabricated steel-domes could be

bought from streets sides, and could be easily installed on rooftops to replace the *memulo* or *mahkota* – the symbolic terracotta crown that was usually found on rooftops.

Bougas, who studied Surau Aur in Patani, made a comparison between the forms of Javanese and Patani mosques. He concluded that local traditions were the ultimate determinant of traditional mosque architecture. The distinctiveness of Patani mosques from Java and the rest of the Malay Peninsula was due to the fact that Patani converted to Islam prior to Melaka, and developed an indigenous form of its own (Bougas, 1992). Its origin of form was also pre-Islamic and was inspired by Buddhist monasteries or *wat.*

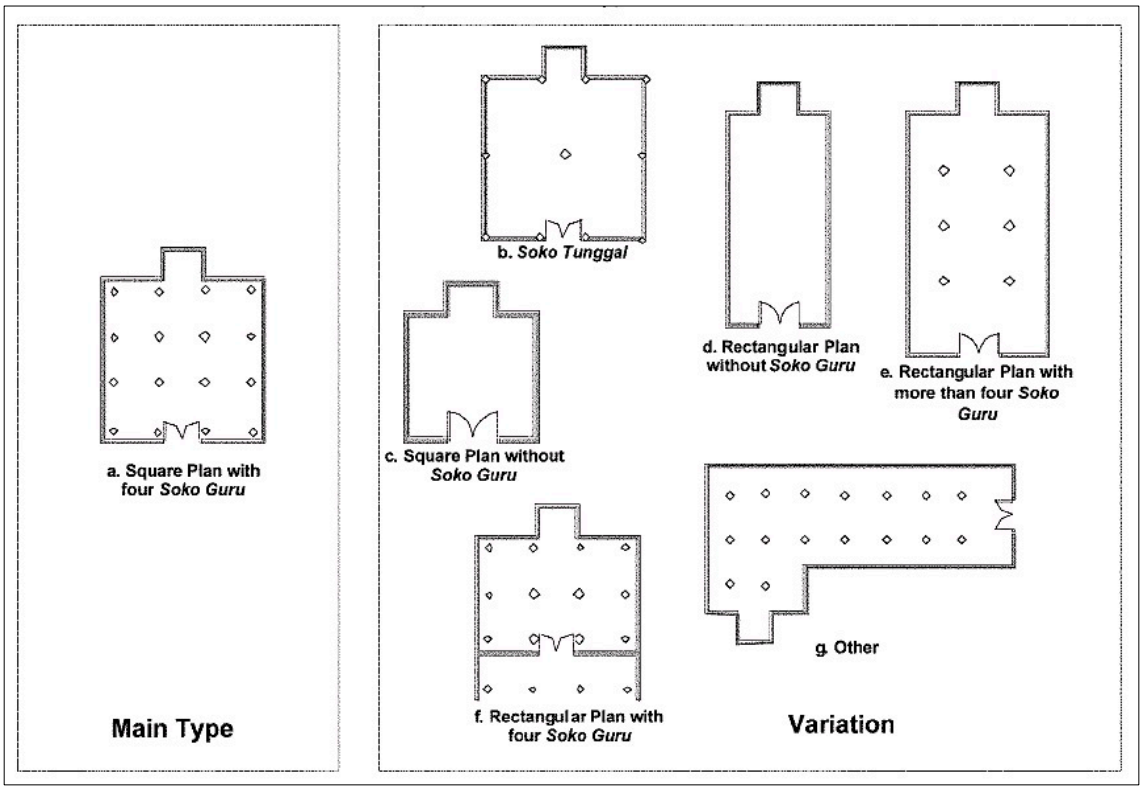
According to Bougas, based on accounts stated in *Hikayat Patani,* Surau Aur's form probably evolved from the type of building in a temple compound known as a *wihan.* Unlike Javanese mosques, which had square plans, Surau Aur has a rectangular plan, with its linear orientation in the direction of the *qibla a*xis. This orientation finds its origin with Hindu temples and Thai *bot* and *wihan,* which were often constructed along a linear, directional axis, with the most sacred elements (for example, the Buddha image) placed at the innermost part of the arrangement. In the case of Surau Aur, the *mihrab* simply replaced the Buddha image as the focal point (Bougas, 1992).

G. F. Pijper, who spent 25 years (between 1925 and 1950) studying various mosques in Java, concluded that the Javanese mosques possess six unique characteristics:

- Square floor plan.
- They are not built on stilts, but on packed, raised foundations.
- Pyramidal (or pointed) roof forms with two to five tiers.
- *Mihrab* in the form of protruding wall on the western or north-western façade.
- *Serambi* (verandas) partly opened or closed – located to the front entrance of the mosque and at times to its sides.
- The mosque was built with open spaces surrounding it, and its compound fence-walled with one or two gateways.

He went so far as to insist that if the mosque does not have a square plan, it must have been built by the Arabs (Pijper, 1985, p. 27).

However, initial visual survey of pre-19th century Javanese mosques reveals that the shape and size of the floor plan will vary depending on the constructional configuration adopted. This preliminary information is confirmed by Bambang Setia Budi's studies of Javanese mosques in a series of articles (Part I, II and III) published in *Journal of Asian Architecture and Building Engineering* (2005). Based on 127 mosques that he studied, 81 mosques have a square plan, whilst 14 have a rectangular plan (Bambang, 2006b). The findings on the typology studies conducted of Javanese mosques conveyed that the square floor plan is considered the main or original type of Javanese mosque, while the rectangular plan is a variation of the original (Figure 2-2).



SOURCE: (BAMBANG, 2006B)

Figure 2-2 Bambang's typological studies on Javanese mosques' plans.

2.2.2 The Development of Mosque Architecture

For the past decade the traditional mosque has received a considerable amount of attention – an interest that has been sparked largely due to the emergence of monumental-scale, grandiose mosque architecture (bearing a resemblance to the architectural languages of the Turkish and Iranians, or a hybrid of those), and replacing what essentially represented the regional character.

This phenomenon should be of major concern to scholars, as the inclination to adopt and follow the latest trend could discriminate the potentials that exist in regional architecture. Furthermore, there is a risk of losing crucial historical data that is embodied in the traditional vernacular architecture, which made up this civilisation of the Malay world to what it is today. As Yudoseputro observed, the development of the ancient Islamic civilisation of the region has never been properly recorded (Yudoseputro, 1986, p. 8).

The difficulty in categorising the existing mosques chronologically is caused by several factors. Firstly, there has never been a continuous effort in the forms of intensive and methodological research to properly survey, record and analyse the development of arts and architecture in the region. Secondly, the discovery of old mosques lacks historical records that become the evidence of changes they have undergone. It is difficult to detect the difference, for example, between mosques built during the time of the *Walis* and mosques that later followed the exact design with similar materials and constructional techniques. It is also difficult to tell how much renovation has been carried out on an old mosque when there are no proper records. Sadly, changes were only noticeable in later years, when mosques started adopting and borrowing forms that were distinctively alien to their original architectural grammar (Yudoseputro, 1986, p. 8). Chronological classification of the mosques' architectural styles thus becomes a superficial display of mosque development.

Abdul Halim Nasir (Abdul Halim, 2004) succeeded in presenting a visual survey of the traditional Malay mosques of the region, showing the richness of the heritage – although his works came without much analysis. He classified the mosques he surveyed in chronological order, but this classification was unable to tell the morphology the mosques had undergone. A. Ghafar (1999) made a listing of a few mosques he surveyed according to the year they were built and the style. The list represents an initial endeavour to recognise mosques' classifications based on stylistic influence.

Tajuddin distinguished the mosques according to historical periodisation: Early Vernacular, Colonial Adaptation and Modern-Post Modern architectural designs (M. Tajuddin Rasdi, undated, p. 7). In *Mosque Architecture in Malaysia*, Tajuddin divided the Malaysian mosque styles into seven distinctive groups: Traditional Vernacular, Sino-Eclectic, Colonial, North Indian, Modern Vernacular, Modernistic Expressionism and Post-Modern Revivalism (M. Tajuddin Rasdi, n.d, p. 17). He is consistent in his criticisms of Modern and Post-Modern mosque architecture, especially on regional characteristics or lack thereof (Tajuddin Rasdi, 2005; M. Tajuddin Rasdi, 1999). At times he employed the theological perspective, using verses from the Qur'ān and the Sunnah, and supporting views from Muslim scholars. At other times his admiration for the work of Frank Lloyd Wright and western architectural theories became the platform upon which he criticised the Southeast Asian mosque designs. In another writing, he attempted to draw parallels between the Prophet's *Sunnah* and Frank Lloyd Wright's organic architectural theories, in search of mosques' architectural vocabularies (Tajuddin Rasdi undated-a, pp. 40–50).

Islamic art and architecture of Island Southeast Asia has never really received much interest from scholars – unlike their predecessor, the ancient Hindu-Buddhist arts. During the Hindu-Buddhist period, grandiose architecture was employed as a means of expressing the great Hindu-Buddhist kingdom, and as a manifestation of its philosophies on life. When Islam dominated the region, this architectural function was missing. The expression of Islamic art found in palaces, mosques and tombs of the Islamic sultanates was generally in the category of minor arts: in the utilities, textiles and tombs. The lack of significant artefacts left the impression that the Islamic period did not really produce material culture that was as sophisticated as the Hindu period.

Yudoseputro asserted that the lack of artistic products from the Islamic period was due to the continuous consolidation and splitting of political powers, as well as the

ongoing war during the Islamic expansions in the region. The socio-political situation at that time resulted in a lack of stimulation to create art, and hampered the zeal for creativity (Yudoseputro, 1986, p. 13). His view was echoed by Sumintardja, who argued that in spite of focusing on nurturing the Islamic civilisation to rival the ancient Hindu culture – which was deeply rooted in the people's customs – the Muslim rulers were forced to face and resist ongoing aggression from the Europeans: the Portuguese, the Dutch and the British. Therefore, Islamic architecture never received proper support from the authorities to expand and develop. By the time the ruling powers were interested in Islamic architecture, the fervour had already been infiltrated by foreign influences (Sumintardja, 1981, p. 101).

Sumintardja further argued that the fact that Islam came through trade activities and not via political strength meant that the authorities never really enforced Islamic civilisation on the people. The Islamic civilisation in this region is unlike India, where the Hindu dynasties were defeated and replaced by Muslim sultanates, (and thus pompous architecture became the hallmark of Islamic presence there) (Sumintardja, 1981, pp. 101–2).

The migration from Hindu to Islamic art and architecture was indeed a very subtle transformation. The Hindu forms and decorative elements persisted and continued into the Islamic period. A few adjustments and adaptations were done to suit the new creed, but the mosque's pyramidal form, plan, layout and landscape, ornamentation and decorative arts closely followed what was left by their Hindu predecessors. Yudoseputero argued that it was Islam's tolerance that had allowed the persistence of old traditions to be Islamised and incorporated into the regional Islamic civilisation (Yudoseputro, 1986, p. 147).

However, the change of the architectural language during the Colonial period was drastic. Yudoseputro observed how the Colonial architectural ambitions had an impact on the regional architecture, which subsequently influenced mosque architecture between the 16th and 18th centuries. The introduction of domes and lighthouse minarets to existing mosques produced chaotic architecture that lacks harmony (as a result of direct borrowing of foreign architectural grammar without undergoing the process of acculturalisation (Sumintardja, 1981; Yudoseputro, 1986, pp. 113–128).

2.2.3 Material and Technology

Most of the traditional mosques in Island Southeast Asia were made of timber. According to Yudoseputro, the tradition of building in stone during the Hindu era was not inherited by the Muslims because the architectural tradition of Majapahit had simply died out by the time Islam arrived. Thus, the skills and technique capabilities of building and carving in stone were not inherited by the craftsmen or the builders in the Islamic period. As a result, the building tradition reverted to carpentry and the use of wood in its building industry. The art of wooden architecture was thus perfected and reached its splendour during the Islamic era (Yudoseputro, 1986, pp. 13–4).

Prijotomo argued that the discontinuation of Hindu-Javanese monuments and building skills was due to natural factors. Hindu political powers were mostly concentrated in the mountainous area of central Java, where volcanic rocks were found in abundance and wood was used for firing bricks. Because Hindu-Javanese cultures emphasised monuments that symbolised immortality, volcanic rock and burnt bricks were used. In coastal areas where those materials were not available, teakwood was used for its strength and durability when expressing this architectural concept. Thus, the modification in architectural form was seen when the materials changed – without sacrificing the initial ideas.

The terraced sanctuary concepts were found both in buildings made of rock and those made of teakwood with *meru*-type roofs. Since Islam was first introduced in the coastal areas of Central and East Java, where wood architecture was more dominant, it was only rational that mosques were built in wood and the craftsmen and builders were inspired to express their architectural concepts according to the new creed. By the time Islam reached the interior part of Java, it was already equipped with an established form of architecture. The establishment of Islamic architecture in wood was therefore in keeping with the natural and social conditions of Java in the 15th and 16th centuries (Prijotomo, 1984, pp. 87–90).

Other literature on Island Southeast Asian mosques' materials and constructional techniques focused on technical issues from an architectural perspective. Bambang studied the structure and constructional typology of Javanese mosques by investigating three Masjid Agungs: Demak, Kasepuhan and Banten. His findings displayed the

difference in the shapes of the main columns: cylindrical and octagonal. He also investigated if the main columns were still structurally active, or if the structural functions had been substituted by other structural elements (Bambang, 2000, pp. 107–115). Ichsan investigated the changes in the materials of the dome and its significance, such as the development in the Baiturrahman Mosque in Aceh, which originally had a non-structural dome clad with wood shingles, but which was replaced by steel and concrete at later stages (M. Ichsan, 2000, pp. 120–126).

2.3 Conclusion

To date, no comparable studies parallel to the major works on Islamic architecture in mainland Islam have been done on the mosques of Island Southeast Asia. Due to the vastness of the region and the technical difficulties of acquiring information, most studies were mainly concentrated on Java Island. These studies were made possible primarily due to the efforts made by pioneering scholars such as de Graaf and Pijper, who paved the way to the studies on mosques. In addition, archaeological documentation of ancient Islamic relics on the island that began in the first quarter of the 20th century has contributed to a renewed interest in pursuing such study. However, such a scenario is limited, if not totally absent, in other islands of the *Dunia Melayu.*

By tracing the surviving material culture of the major cities of pre-modern Island Southeast Asia, the present study attempts to document, analyse and explain the idiomatic changes that occurred in mosques of the region, from the earliest surviving mosque to the stage when it seems that the mosque architecture of the region finally took its form.

3 CHAPTER 3: THE MOSQUE IN ISLAM

3.1 The Mosque: Definition, History and Application

The Arabic word مسجد, pronounced '*masjid'* (mosque), etymologically is derived from the letters س-ج-د *(sajada)*, which is the root word for the action of 'prostration' (*yasjud*)[24]. The addition of the letter *mim (*م) in front of the word transformed it from being a verb to a noun to denote a place (to prostrate), a utility, or a medium which allows for the action (of prostrating) to be performed. The word *masjid*, thus, designates the place or the utility which facilitates for prostration to be performed (Ibn Manzur, III, 1941; Al-Zarkashy, 1384H, pp. 26-8). The Islamic legal meaning for *masjid*, however, expands and gives a wider interpretation for the word, albeit a much ambiguous concept of a designated edifice.

Based on the *hadīth*[25] of the Prophet Muhammad (S): 'The whole earth is made a *masjid* for me' (Al-Bukhari, *hadith* no. 438; Muslim, *hadith* no. 1161-7); Al-Qadhi Íyadh expanded the word to include every space on the earth, which has been made pure for the Muslims to perform their prayers *(salat)* is considered a *masjid;* except those places which have been ascertained by Islamic ruling as being impure. According to Al-Qurthubi, this legal aspect of the worship *(ibadah)* distinguishes the Prophet Muhammad (S) and his people *(ummat)* from previous prophets who were only allowed to perform *salat* in designated places such as churches and synagogues (Al-Zarkashy, 1384H, p. 27).

The first *masjid*, according to Islamic belief, is Al-Masjid al-Haram in Makkah as denoted by the verse in the *Qur'ān*, 'Indeed the first house placed for mankind is the one in the blessed *Bakkah (*Makkah*)*' (3:96). The Prophet (S) when asked by his companion Abu Dzar regarding the first *masjid* placed on earth answered, "Masjid al-Haram followed by Masjid al-Aqsa (in Jerusalem)" (Al-Zarkashy, 1384H, p.29). The

[24] *Yasjud:* verb meaning 'he prostrates'. Refer to Ibn Manzur, *Lisan al-'Arab*, vol. III.

[25] *Hadīth* is a narration of the conduct of the Prophet.

Prophet's Mosque (Masjid al-Nabawi) in Medina, however, is considered the second holiest mosque after Al-Masjid al-Haram, while Masjid al-Aqsa follows after the two mosques in reverence and prominence. In most of the writings of classical scholars on mosques, these three mosques are discussed in length in the foremost section, while other mosques were discussed in general terms.

The word *masjid* in its singular and plural form *(masajid)* is found in twenty eight instances in the *Qur'ān*. In most of these occurrences (i.e. seventeen instances), they refer to Masjid al-Haram in Makkah; two verses refer to Masjid al-Aqsa in Jerusalem; and the rest of the verses point towards purposely built edifice for devotional activities. Despite the absence of precise physical descriptions, the verses clearly exhibit the nature of the activities that took place in the mosques at the time of the (*Qur'ānic*) revelation. Apart from the word *masjid*, '*bayt'* (house) is also used to refer to the mosque. Sixteen instances where the word *bayt* are used in the *Qur'ān* are dedicated for the *Ka'aba* and the Masjid al-Haram in Makkah, only two verses directly address the existence of other houses i.e. other *masajid.*

> "Verily the first house appointed for mankind was that of Makkah…" (3:96).

> "In houses (mosques) which Allah has ordered to be raised (to be cleaned and to be honoured) …" (22:36)

A *hadīth* narrated by Ibn 'Abbas precisely captured the significance of the mosque as the house of God:

> "*Al-masajid* (the mosques) are the houses of God, they sparkle to the occupants of heavens as the sparkle of the stars to the occupants of earth" (Al-Thabarani; Majmu' al-Zawa'id 2:7)

As houses of Allah, visitors to the mosque (i.e., mosque goers) are expected to be treated as guests. This aspect of the mosque indicates that its presence within the community is not merely as a centre for worship. Various expressions used in the *Qur'ān* demonstrate that the mosque's social function forms an integral aspect of the mosque's inception and is inseparable from its liturgical or religious function:

> "A place of resort for mankind and a place of safety" (2:125)
> "Violate not the sanctity of the Symbols of Allah….nor the people

coming to the sacred house seeking bounty and good pleasure of their Lord" (5:2)

"An asylum of security" (5:97)

"..that they should purify My House for those who are circumambulating it, or staying, or bowing or prostrating" (22:25-6)

"In houses (mosques) which Allah has ordered to be raised (to be cleaned and to be honoured) …" (22:36)

3.2 The Mosque in the *Qur'ān*

The term *'masjid'* (place of prostration) appears twenty-eight times in the *Qur'ān* (Muhammad Fuad, 1987). In fifteen instances the word refers to Al-Masjid al-Haram – the *Ka'aba* in Makkah. Three *ayah* (verse) address *Ka'aba* as being the *Qibla* or direction for prayers for the Muslims (2:144, 149, 150), one *ayah* connects its significance to the Mosque of Al-Aqsa in Jerusalem (17:1) while the rest of the *ayah* are related to the sanctity aspects of the mosque, such as prohibition for non- Muslims to enter (9:28), prohibition from spilling blood (2:191, 217) and transgression (5:2), as well as condemnation for such actions (8:34, 22:25, 48:25). Devotional activities taking place in it in the forms of *hajj* (pilgrimage) and *umrah* (2:196, 48:27), hajj administration (9:19), and political activities that took place near the *Ka'aba* (9:7) are also mentioned.

In two instances, the word *masjid* refers to Masjid Al-Aqsa in Jerusalem (17:1, 7). In *Surah Al-Kahf* (18:21) the word *masjid* is used to describe the worshipping place built on a venerated site of the men of the cave[26]; while *Surah Al-Hajj* (22:40) lists a number of sanctuaries – monasteries, churches, synagogues and mosques; acknowledging various types of worshipping places where God is remembered. The rest of the verses (in nine instances) address various aspects of the mosque's functions, such as, the spiritual foundation on which a mosque should be built (9:107,108); the command to perform prayers, invocations and *I'tikaf* (2:114, 2:187, 7:29, 72:18); prescribed action when attending mosques (7:31) and mosque management (9:17-8). None of the verses describe the physical forms or the spatial qualities of the edifice.

[26] The seven sleepers according to Biblical Tradition

NOS	*WORD*	*AYAH AND MEANING*	*DESCRIPTION*	*CODE*
1	مسجد الحرام	***2:144*** …Surely We shall turn you to a *Qibla* that shall please you, so turn your face in the direction of *Al-Masjid al-Haram*...	Command to pray facing the direction of *Ka'aba* in Makkah	S/D
2	"	***2:149*** And from wherever you start forth, turn your face in the direction of Al-Masjid al-Haram	Command to pray facing the direction of *Ka'aba* in Makkah	S/D
3	"	***2:150*** And from wherever you start forth, turn your face in the direction of Al-Masjid al-Haram	Command to pray facing the direction of *Ka'aba* in Makkah	S/D
4	"	***2:191***..And fight not with them at Al-Masjid al-Haram, unless they fight you there	Prohibition from spilling blood at *Ka'aba*, Makkah: signifying the sanctity of the place	S
5	"	***2:196***..This is for him whose family is not present at Al-Masjid al-Haram	The ritual of hajj (pilgrimage)	D
6	"	***2:217***...to prevent access to Al-Masjid al-Haram and to drive out its inhabitants, and *al-fitnah* is worse than killing...	Prohibition from spilling blood at *Ka'aba*, Makkah: signifying the sanctity of the place	S
7	"	***5:2***.. and let not the hatred of some people (who once) prevented you from Al-Masjid al-Haram lead you to transgression	Sanctity of *Ka'aba*, Makkah	S
8	"	***8:34*** And why should not Allah punish them while they stop (men) from Al-Masjid al-Haram, and they are not its guardians? None can be its guardian except the pious, but most of them know not.	Sanctity of *Ka'aba*, Makkah	S
9	"	***9:7*** …except those with whom you made a covenant near Al-Masjid al-Haram?	Political activities taking place at *Ka'aba*, Makkah	A
10	"	***9:19*** Do you consider the providing of drinking water to the pilgrims and the maintenance of Al-Masjid al-Haram as equal to the worth of those who believe in Allah and the Last Day...	Hajj administration at *Ka'aba*, Makkah	A
11	"	***9:28***...So let them not come near Al-Masjid al-Haram after this year...	Sanctity of *Ka'aba*, Makkah – prohibition for non Muslims to enter	S
12	"	***17:1*** Glorified be He (Allah) Who took his slave (Muhammad) for a journey by night from Al-Masjid al-Haram to the farthest mosque (Al-Masjid al-Aqsa)..	The event of Isra' Mi'raj – signifying the importance of Jerusalem in Islam	S
13	"	***22:25*** Verily! Those who disbelieve and hinder (men) from the Path of Allah, and from Al-Masjid al-Haram...	Sanctity of *Ka'aba*, Makkah and devotional activities that took place in it	S/D
14	"	***48:25*** They are the ones who disbelieved and hindered you from Al-Masjid al-Haram	Sanctity of *Ka'aba*, Makkah	S
15	"	***48:27...***Certainly you shall enter Al-Masjid al-Haram…	Sanctity of *Ka'aba*, Makkah	S
16	مسجد	***7:29*** Say (O Muhammad), My Lord has commanded justice and that you should face Him in each and every place of worship *(kulli masjidin)*	Commandment on performing prayers	D
17	"	***7:31*** O Children of Adam! Take your adornment in each *masjid*…	Noble Qur'an: adornment (by wearing clean clothes)	D

NOS	*WORD*	*AYAH AND MEANING*	*DESCRIPTION*	*CODE*
18	"	***9:108*** Verily, the mosque whose foundation was laid from the first day on piety is more worthy that you stand therein (to pray).	Foundation/intention of building a mosque	D
19	مسجد الاقصى	***17:1*** Glorified be He (Allah) Who took his slave (Muhammad) for a journey by night from Al-Masjid al-Haram to the farthest mosque (Al-Masjid al-Aqsa)..	The event of Isra' Mi'raj – signifying the importance of Jerusalem in Islam	S
20	,,	***17:7*** Then, when the second promise came to pass, (We permitted your enemies) to make your faces sorrowful and to enter the mosque (of Jerusalem) as they had entered it before…	In relation to Masjid Al-Aqsa in Jerusalem	S
21	مسجدا	***9:107*** And as for those who put up a mosque by way of harming and disbelief, and to disunite the believers…	Foundation/intention of building a mosque	D
22	"	***18:21..***.Construct a building over them, their Lord knows best about them. Then those who won their point said, 'We verily shall build a place of worship *(masjid)* over them'	The story of the people of the cave and veneration of certain sites before Islam	D*
23	مساجد	***2:114*** And who is more unjust than those who forbid that Allah's Name be glorified and mentioned much in Allah's mosques and strive for their ruin?	Devotional activities in mosques	D
24	"	***2:187***...And do not have sexual relations with them (your wives) while you are in *I'tikaf* in the mosques...	Devotional activities in mosques	D
25	مساجد	***9:17*** It is not for the *Musyrikin* to maintain the mosques of Allah…	Sanctity of mosques, mosques' management issues	S/A
26	"	***9:18*** The Mosques of Allah shall be maintained only by those who believe in Allah and the Last Day…	Sanctity of mosques, mosques' management issues	S/A
27	"	***22:40*** For had it not been that Allah checks one set of people by means of another, monasteries, churches, synagogues and mosques, wherein the name of Allah is mentioned much would surely have been pulled down..	Acknowledgement of worshipping places other than the mosques	D*
28	"	***72:18*** And the mosques are for Allah (alone), so invoke not anyone along with Allah.	Devotional activities in mosques	D

Note:

A Administrative or other activities that take place in a mosque

D Devotional activities

S Sanctity Issues

D* Other venerated sites

Table 3-1 Qur'ānic verses containing the word '*masjid*' (mosque)

As mentioned earlier, the mosque is also referred to as 'the house' of Allah using the word (بيت) *bayt.* In the *Qur'ān,* a total of sixty-five instances are found containing the word; from which fifteen refer to *Bayt al-Haram* (the Sacred House*)* another name for *Ka'aba,* which is also known as *Bayt al-'Atiq* (The Ancient House*)*

(22:29, 33). Most of these *ayah* discuss the sanctity of the *Sacred House* and Makkah itself (3:96, 22:26) as a place of safety and asylum for security (2:125, 3:96, 5:2 and 5:97); where invocation is done for Allah alone (22:26, 106:3) and activities such as prayers, *I'tikaf*, circumambulation, animals sacrifice, *Hajj* and *'Umra* are performed (2:125, 2:158, 3:97, 22:29, 22:26, and 22:33). There are also verses related to the story of Ibrahim and Isma'il when raising the foundation of *Ka'aba* (2:125, 2:127, and 14:37). When *bayt* is used in its plural form '*buyut'*, only one verse is found to carry the general meaning of mosques as the 'houses of Allah' (22:36).

In eight instances the word *bayt* has a physical or material description to it. Three verses describe the building traditions of the people of *Thamud* who used to live in *Mada'in Salih* (7:74, 15:82, 26:149). Two verses give general descriptions of the materials used by people living in harsh and arid climates (16:80-1). One verse (2:189) clarifies the position of Islam in viewing pre-Islamic custom of entering a house from the back (door) and rectifying the concept of *al-birr* (righteousness). In two other instances (17:93 and 43:33) the *Qur'ān* gives a detailed description of a house lavishly ornamented. The rest of the verses connected to 'house' deal mostly about the quality of domestic life in Islam in which detailed rulings associated with family life and social relationships are stated without describing any of its spatial qualities.

NOS	*WORD*	*AYAH AND MEANING*	*DESCRIPTION*	*CODE*
1	بيت House	***2:125*** And remember when We made the House a place of resort for mankind and a place of safety. And (you) have taken the *Maqam* of Ibrahim as a place of prayer.	Sanctity of *Ka'aba* and devotional activities	S/D
2	"	***2: 127*** And remember when Ibrahim and Isma'il were raising the foundations of the House (saying), "Our Lord! Accept (this service) from us. Verily You are the All-Hearer, the All-Knower".	History of *Ka'aba*, relationship between Muslim and the family of Ibrahim	H
3	"	***2:158***...So it is not a sin on him who performs Hajj or 'Umra of the House to perform the going (tawaf) between them (As-Safa and al-Marwah).	Sanctity of *Ka'aba* and devotional activities	S/D
4	"	***3:96*** Verily, the first House (of worship) appointed for mankind was that of *Bakkah* (Makkah), full of blessing, and guidance for the whole world.	History of *Ka'aba* Sanctity of *Ka'aba* and devotional activities	H/S/D
5	"	***3:97*** …And Hajj (pilgrimage to Makkah) to the House (*Ka'aba*) is a duty that mankind owes to Allah, those who can afford the expenses...	Sanctity of *Ka'aba* and devotional activities	S/D
6	"	***8:35*** Their prayer at the House (of Allah) was nothing but whistling and clapping of hands…	History of *Ka'aba* Pre-Islamic Jahilliyyah practice of worshipping around *Ka'aba*	H
7	"	***22:26*** And (remember) when We showed Ibrahim the site of the House (saying): 'Associate not anything (in worship) with Me…'	History of *Ka'aba* Sanctity of *Ka'aba* and devotional activities	H/S/D
8	"	***106:3*** So let them worship the Lord of this House.	Sanctity of *Ka'aba* and devotional activities	S/D
9	البيت الحرام The Sacred House	***5:2*** O you who believe! Violate not the sanctity of the Symbols of Allah, nor the Sacred Month, nor the animals brought for sacrifice, nor the garlanded people or animals, nor the people coming to the Sacred House seeking the bounty and good pleasure of their Lord…	Sanctity of *Ka'aba* and devotional activities	S/D
10	"	***5:97*** Allah has made the *Ka'aba*, the Sacred House, an asylum of security and Hajj and 'Umrah for mankind…	Sanctity of *Ka'aba* and devotional activities	S/D
11	البيت العتيق The Ancient House	***22:29*** …and let them circumambulate the Ancient House	Sanctity of *Ka'aba* and devotional activities	S/D
12	"	***22:33*** …and afterwards they (the cattle) are brought for sacrifice unto the Ancient House	Sanctity of *Ka'aba* and devotional activities	S/D
13	بيتك الحرام Your Sacred House	***14:37*** O our Lord! I have made some of my offspring to dwell in an uncultivable valley by Your Sacred House; in order O our Lord, that they may perform *Salat*...	History of *Ka'aba* Sanctity of *Ka'aba* and devotional activities	H/S/D
14	بيتي My House	***2:125*** …and We have commanded Ibrahim and Isma'il that they should purify My House for those who are circumambulating it, or staying *(I'tikaf),* or bowing or prostrating themselves (there, in prayer).	History of *Ka'aba* Sanctity of *Ka'aba* and devotional activities	H/S/D
15	"	***22:26*** …and sanctify My House for those who circumambulate it, and those who stand up for prayer, and those who bow and make prostration (in prayer).	Sanctity of *Ka'aba* and devotional activities	S/D
16	بيوت Houses	***22:36*** In houses (mosques), which Allah has ordered to be raised (to be cleaned and to be honoured), in them His name is glorified in the mornings and in the afternoons or the evenings.	*Bayt* in plural form- to denote mosques in general	D

Note:
H Historical Context
S Sanctity
D Devotional Activities

Table 3-2 The words *'bayt'* as appeared in the Qur'ān

NOS	***WORD***	***AYAH AND MEANING***	***DESCRIPTION***
1	بيت HOUSE	***17:93*** Or you have a house of adornable materials (like silver and pure gold)…	What the polytheists demand from the Prophet before they would believe in his message
2	بيت HOUSES	***2:189*** …it is not *al-birr* (righteousness) that you enter the houses from the back but *al-birr (*is the quality of the one who) fears Allah. So enter houses through their proper doors...	Rectification of a pre-Islamic concept of what is considered *al-birr*
3	"	***7:74*** And remember when He made you (people of Thamud) successors after 'Ad (people) and gave you habitations in the land, you build yourselves palaces in plains, and carve out homes in the mountains.	Building traditions of ancient civilizations of people of Thamud.
4	"	***15:82*** And they used to hew (carve) out dwellings from the mountains (feeling themselves) secure.	Building traditions of people of al-Hijr.
5	"	***16:80*** And Allah has made for you in your homes an abode, and made you out of the hides of the cattle (tents for) dwelling, which you find so light (and handy) when you travel and when you stay, and of their wool, fur and hair (sheep wool, camel fur and goat hair), a furnishing and articles of convenience – a comfort for a while. ***16:81*** And Allah has made for you out of that which He has created shades, and has made for you places of refuge in the mountains, and has made garments to protect you from the heat, and coats of mail to protect you from your (mutual) violence...	General indications of materials used for houses, furnishings and protection from harsh weathers and transgressors.
6	"	***26:149*** And you carve houses out of mountains with great skill	People of *Mada'in Salih's* building tradition
7	"	***43:33-5*** And were it not that all mankind would have become of one community (all disbelievers), We would have provided for those who disbelieve in the Most Beneficent (Allah) silver roofs for their houses, and elevators (of silver) whereby they ascend. And for their houses doors (of silver) and thrones on which they could recline. And adornments of gold. Yet all these would have been nothing but an enjoyment of this world. And the Hereafter with your Lord is only for the *Muttaqun.*	The lavishness one could have in a house is nothing compared to what he could have in the Hereafter.

Table 3-3 The word *'bayt'* with physical/material description

3.3 The Mosque in the *Sunnah* and the Discourses of Muslim Scholars

Sunnah, linguistically, means a path or a way (Hilal, 1998, p.34). In pre-Islamic Arabia, the Arabs used the word '*sunnah'* in reference to ancient and continuous practices of the community that were inherited from their forefathers. The opposite of *sunnah* is *bidáh*, or innovation, which is characterised by lack of precedent and continuity with the past (Kamali, 2003, p.58). In its juristic usage, *sunnah* is a legal proof next to the Qurán and a source of the *Shariáh* (Islamic legal theory) (Kamali, 2003, p.61). The *sunnah* encompasses the verbal (*qawli*), actual (*fi'li*) and tacit approval (*taqriri*) of the Prophet Muhammad (S) as witnessed by his companions; and they are recorded by the jurists through the compilation of thousands of the *aHadīth*[27]of the Prophet (S).

With regard to the mosque, the most comprehensive collection of *aHadīth* pertaining to the topic was compiled by the 13th century scholar Al-Zarkashy (d.794 H) (Al-Zarkashy, 1384H). His work, *"I'lam as-sajid bi ahkam al-masajid"* is a treatise of the mosque which consists of hundreds of *aHadīth* of the Prophet (S) with commentaries from different scholars. The work is divided into two main parts, the first deals with the three major mosques in Islam: The Masjid al-Haram in Makkah, the Masjid an-Nabawi in Medina and Masjid al-Aqsa in Jerusalem. The second part is labeled 'The rest of the mosques' thus listing all the *hadīth* regarding mosques in general, with commentaries and discussions on the rulings. A more concise work on the mosque was done by al-Jara'I, a 14th century scholar. His work was presented in similar manner as al-Zarkashy, where the first part looks into the three major mosques, while the second part deals with the rulings of the other mosques in general.

In seeking the Islamic perspective regarding the mosque and its functions, the work of al-Zarkashy is mainly consulted as it comprehensively presents the classical scholars' discourses pertaining to activities taking place in a mosque in the light of the *sunnah* of the Prophet (S). However with regards to capturing the attributes of the mosques and its physical manifestation as intended by the Prophet (S), the work of recent Muslim scholars such as Husayn Mu'nis in "*Al-Masajid"*(Mu'nis, 1981) and

[27] AHadīth = plural for Hadith.

Abdullah Qasim al-Washli in "*Al-Masjid wa Nashathuhu al-Ijtima'I ála Madari al-Tarikh"*(Al-Washli, 1990) are also consulted to complement the discourses of classical scholars.

3.3.1 The Mosque's Sanctity

Once a space is designated as a *masjid*, it instantly marks its vicinity by the conditions imposed upon those who enter the space. The conditions of entry demarcate the sacred from the profane zones in stages based on the liturgical requirements and the legal status of actions when performed within the designated area. The legal status which serves as the determinants of the zones of the mosque's sanctity ranges between *mubah* (permissible), *makruh* (disliked), *istihbab* (encouraged) and *haram* (forbidden).

Haram (forbidden) and *makruh* (disliked) acts in the mosque are those which either relates to the actions or the purity conditions of the mosque goers. Any activities which desecrate the purity of the mosque such as spitting (Al-Bukhari 4:154), bringing in impure objects (Sahih Muslim 1:390; 'Umdat al-Qari 4:216), being in the state of impurity (Al-Zarkashy, 1384H, pp. 314-8) such as female having menstruation (Al-Zarkashy, 1384H, p. 383), carrying out *hudud* in the mosque (Sunan Abi Daud 6:293; Al-Zarkashy, 1384H, p.371); and causing distractions to the activities of worshipping such as lavish decorations of the mosque (Al-Zarkashy, 1384H, p. 335-338; Umdat al-Qari 4:204) and trading activities (Al-Zarkashy, 1384H, pp. 312, 327) are all considered as *haram.*

Activities if carried out will most likely to cause impurity to the prayer space, distract worshipping activities and annoy the mosque goers are often classified as *makruh* (disliked) such as bringing in animals and children to the mosque[28] (Al-Washli, 1990, pp. 44-5; Al-Zarkashy, 1384H, pp. 312, 327); making noise and raising voice (Al-Bukhari, Al-Qurthubi cited in Al-Zarkashy, 1384H, p. 326); planting trees on spaces that may be used for prayers (Al-Zarkashy, 1384H, p. 241); bringing in weapons (Al-Zarkashy, 1384H, pp. 354-5); enlarging *mimbar* thereby reducing the prayer space (Al-Zarkashy, 1384H, p. 374) and making the mosque as a thoroughfare (Al-Thabarani).

The most important part of the mosque, which is the prayer space, is primarily marked by several liturgical conditions expected to be performed by the one who enters it. Based on various *ahadith* recorded from the Propeht (S), it is *istihbab* (encouraged)

[28] Due to the probability that they may cause impurity of the prayer space, and distraction to the worshipping activities. If not, their entry to the mosque is allowed.

for the one entering the prayer space to have ritual ablution (*wudhu')* (Al-Zarkashy, 1384H, p. 304), to leave the shoes outside the prayer space (Al-Zarkashy, 1384H, p. 380), to enter with the right foot (Al-Zarkashy, 1384H, p. 347), to perform salutational prayer *(salat tahiyyat al-masjid)* upon entering (Al-Zarkashy, 1384H, p. 350) as well as to have the intention to perform *I'tikaf* [29] (Al-Zarkashy, 1384H, p. 349). It is also encouraged to have the space always clean (Al-Zarkashy, 1384H, p. 335), scented (Al-Zarkashy, 1384H, p. 338) and well-lit (Al-Zarkashy, 1384H, p. 339).

Based on these liturgical requirements, it is essential for the boundary of a mosque to be clearly marked, as it demarcates the profane from the sacred and defines the various zones within the mosque based on different liturgical precepts. It is possible for a mosque to be built anywhere including on old graveyards (Al-Zarkashy, 1384H, p. 381) as long as the site is prepared according to the Islamic requirements mentioned above. The first mosque of the Prophet (S) was built on a land purchased from two orphans. It was originally covered with old graves, ruins and palm trees; and used for keeping camels and small animals. The Prophet (S) ordered the trees to be cut, the graves to be dug out and the ruins leveled (EI2, Vol.6/ Masdjid).

[29] to remain in the mosque for a prescribed period of time for the purpose of worship

3.3.2 Ritual Activities in a Mosque

The mosque proper is primarily built to cater for daily congregational prayers which were made compulsory during the time of the Prophet (S). The importance of attending congregational prayers at the mosque is emphasised by the *hadīth*:

> 'The prayer which a man performs in congregation is worth twenty-five of his prayers in his home or in the market place' (Al-Bukhari: Adhan, ch.30, 31; Salat ch. 87; Muslim: Masajid nos.245-8)

Muslim narrated a *hadīth* regarding a blind man asking the Prophet (S) to be excused from attending the congregational prayer at the mosque by praying in his house, but the Prophet (S) declined and insisted that he should attend the mosque since he can hear the call to prayer *(adhan)*. The Prophet (S) even considered burning down the houses of those who were absent from the congregational prayers (Al-Bukhari, Muslim).

The prayer activities were consequently removed from being a personal affair to become a public or communal agenda. As the community members are expected to come together and perform their five daily prayers[30] in a communal mosque, the congregational prayers consecutively serve as the heart of and the platform for social activities of a Muslim community.

Apart from the five daily prayers, the mosque is used for other congregational devotional activities. They are the weekly compulsory Friday prayers (*salat al-Jum'ah*), annual prayers for the main festivities of '*Id al-Adha*[31] and *'Id al-Fithr*[32], occasional prayers such as *Salat al-Khauf*[33], *Salat al-Khusf wa al-Ku*suf[34], *Salat al-Istisqa'*[35], *Salat*

[30] The daily congregational prayers are carried out five times a day - before dawn (*Subh*), midday (*Dzuhr*), in late afternoon ('*Asr)*, at dusk (*Maghri*b) and at night *('Isya')*.

[31] On the 10th of the Islamic month of *Dzul-qaidah*

[32] On the 1st of *Shawwal*

[33] Prayer in times of fear, such as during war

[34] Prayer during eclipse of the moon or the sun

[35] Prayer asking for rainfall

al-Janazah[36]and *Salat al-Hajah*[37]. During the month of *Ramadhan* (the fasting month), the mosque accommodates for devotional activities throughout the day and night for the whole of the month, such as *Salat al-Tarawikh*[38] which are performed after '*Isha*' each night, and *I'tikaf* in which participants (inclusive of men, women and children) stay over at the mosque for a prescribed period of time[39]and concentrate on devotional activities ranging from reading the *Qur'ān*, listening to lessons and sermons (*khutbah*), and performing solitary and supererogatory prayers (*nafilah*).

[36] Preparatory prayer for the deceased after the body has been washed and prepared to be buried

[37] Prayer asking for help or guidance in specific matters

[38] *Tarawikh* prayer is longer than the daily prayers. Daily prayer ranges from two to four *rakaáh* (which takes the most of ten minutes to complete). While *Salat al-Tarawikh* is performed in 11 to 23 *raka'ah* (could take up to one hour or more). *Raka'ah* is a unit of prescribed movement in a prayer made of bodily movements involving standing, bowing , prostrating and a sit between two prostrations.

[39] Usually in the last 10 days of the month of *Ramadhan*, although some start from the beginning of the month

3.3.3 Social Functions of a Mosque

As devotional activities of the mosque promote frequent meetings and gatherings of the believers, the mosque naturally transforms into a community centre where socio-religious activities are carried out. Concurrent with devotional activities, the time and space provided by the mosque are utilised by community members to partake in activities which do not contradict the regulations of using the space.

Al-Zarkashy recorded various narrations on varioua socio-religious activities that are encouraged (*istihbab*) to be organised in the mosque.; among them are conducting religious classes for children and adults and performing marriage ceremony. It is also permissible (*mubah*) to eat in the mosque; rest or sleep; give charity; distribute alms; pass judgements and listen to judiciary rulings (Al-Zarkashy, 1384H, pp. 305; 327-30; 353; 360; 370; 385).

During the time of the Prophet (S), children were known to have been present inside of the prayer hall as well as playing in the courtyard or the compound of the mosque. In a *Hadīth* narrated by Muslim, Abu Qatadah reported on how the Prophet (S) led the prayer while holding Umamah, the daughter of Zaynab. He would hold her whenever he was standing, and put her down when prostrating (Muslim 1/385). In another occasion, An-Nasa'ie reported on how the Prophet (S) prolonged his prostration and waited until his grandsons Hasan and Husayn came off from saddling his back (Sunan An-Nasai ie 2/229). 'Umar al-Khathab (r.a) who was separated from his son 'Asim found him one day playing in the courtyard of the mosque in Quba' (Jami'al-Usul 3/615).

Women were also known to be present in the mosque with their children. Although Islam prefers for women to pray in their houses as indicated by the *hadīth* of Abu Hurairah cited by Zarkashy (1996, p. 359), 'That a woman prays in her *makhdu'*[40] is greater in rewards because she is praying in her house'; the Prophet (S) however warned his companions against denying the women their rights in attending the mosque. Al-Washli (1990, p. 50) cited that the Prophet (S) ordered the men to allow their women

[40] *Al-makhdu*'is a small house within a house purposely built for prayer.

to attend the mosque when they asked for permission and said, 'Do not prevent the servants of Allah from (attending) the mosques of Allah' (Jami'al-Usul: 11/198-9).

As women's preoccupation and responsibilities lay mainly with the house chores and their children, the Prophet (S) was careful not to prolong his reading in prayers in the presence of women and children. In a *hadīth* narrated by Al-Bukhari and Muslim, from Anas (r.a) that the Prophet (S) said,

> Indeed I have had the intention to prolong my *salat* then I heard the crying of a child, so I shortened my prayer as I know how much affected his mother is with his cries (Sahih Al-Bukhari 2/202; Muslim 1/342 No 292).

The Prophet's mosque was also known to have been accommodated for easy entrance and exit of women partaking in the congregational prayers. The women section was placed at the back of the men's section and from the *Hadīth* of Um Salamah (r.a) she said, "The Prophet (S) will stay in his place for a while upon giving *salam* (i.e. upon finishing *salat*) until the women stood up (and left)". In her opinion, the Prophet (S) has purposely acted that way to allow the women to leave the mosque first before the men (Al-Bukhari, , 2/351). To facilitate for the women's access to the mosque, the Prophet (S) has designated one of the doors of the mosque specifically for women and the door was named *Bab al-Nisa'* (Women's Door*)* (Al-Bukhari, 1/533; Al-Washli, 1990, p. 51).

The Prophet's mosque was also known to be the abode for members of the community who had nowhere to live and no family members *(al-munqathi'in)*. A group of seventy Arabs who embraced Islam and came to Medina without money and a place to live were known to have taken the arbour of the mosque as their shelter (EI2, Vol.6/Masdjid). This facility was not limited to men only, 'Aisha (r.a) narrated of the presence of a black woman who converted to Islam and lived in a very small house *(hafsh)* made for her in the mosque' (Al-Bukhari, 1/113).

The mosque's courtyard or compound was also used to house foreign delegations as well as to tend for the sick and injured. Al-Bukhari in the chapter of *'Al-Khaymah fi al-masjid lil-mardha wa ghairihim'* reported from 'Aisha (r.a) on the tent set up in the mosque for Sa'ad bin Mu'adz who was injured in the war of *Khandaq* (Fath al-Bari 1/556). Ibn Kathir also reported on the presence of a tent set up in the mosque for a lady from Aslam known as Rafidah who tended the injured (Al-Bidayah wa an-Nihayah 4/121).

In various narrations, the Prophet (S) was reported to have received foreign delegations in his mosque and built up tents for them in the mosque so that they were able to witness the activities carried out in the mosque which could possibly attract them to embrace Islam. Al-Washli (1990, pp.76, 88) cited reports recorded by ‘Abd al-Razzaq from Ibn Jurayj that the delegations of Tsaqif were housed in tents in the mosque so that they saw how the people prayed and listened to the recitation of the *Qur’ān* (Musnaf ‘Abd al-Razzaq: 1/415). Among delegations which were received by the Prophet (S) at the mosque were Bani Tamim, Dhamam bin Tsa’labah, ‘Adi bin Hatim, Kinda, Jarir bin ‘Abd Allah al-Bajli and al-Harith bin Hasan al-Bakriy (Al-Washli, 1990, p. 76).

Motivational activities such as the display of combat craft and recitation of spiritual poems were also carried out in the mosque of the Prophet (S). ‘Aisha once described an occasion when she watched some Sudanese or Abyssinians gave a display with shield and lance in the mosque’s courtyard (Sahih al-Bukhari 1/123). With regards to recitation of poetries, only poetries encouraging good deeds are allowed in the mosque (Al-Zarkashy, 1384H, pp. 322-23).

Judiciary proceedings were known to have been carried out in the mosque in various places such as from the *mimbar*, within the prayer hall and in the compound of the mosque (Al-Washli, 1990, p.60). According to various narrations of the *Hadīth* of the Prophet (S), the prayer hall sometimes turned to become a resolution chamber for disputing parties (Al-Bukhari, 1/155) and where oath of condemnation *(li’an)* was declared between a husband and wife (Al-Washli, 1990, p. 61; Al-Zarkashy, 1384H, p. 373). Although some scholars dislike turning the mosque into a legal court, as highlighted by Al-Zarkashy (1990, pp. 370-1); many of the distinguished judges such as Qadhi Syuraih, al-Sya’bi, Yahya bin Yu’mar and Ibn Abi Laila have used the mosque as a place to pass rulings as it was a practice inherited from the time of the Prophet (S) and his companions (Al-Washli, 1990, pp. 61-3).

3.4 The Prophet's Mosque as the Archetype for Mosque's Design

3.4.1 The Sacred Architecture of the Prophet's Mosque

The formative stage of mosque design in the time of the Prophet (S) serves as a crucial point from which design decision criteria of a mosque was founded. The evidences from Islamic sources demonstrated that the founding of the Prophet's Mosque was intentional from beginning; and it was not unplanned.

According to the narration of Imam Ahmad in the *Musnad Al-Imam Ahmad* for *Hadīth 11046* and *11864*; and Al-Tirmidzi with regard to the exegesis of the verse in Qur'ān Surah At-Taubah 108 '…Verily, the mosque whose foundation was laid from the first day on piety is more worthy that you stand therein (to pray)…'; two men who disputed regarding the mosque mentioned in the verse came to the Prophet (S) for verification, and the Prophet (S) replied *"Hua hadza al-masjid* (It is this mosque)*"* i.e. the Prophet's Mosque. In a *Hadīth* narrated by Muslim (*Kitab al-Hajj*); he replied, "*Hua masjidukum hadza* (It is this mosque of yours)", similarly pointing to the Prophet's Mosque in Medina (Ibn Kathir 2/385, p. 612).

According Islamic faith, every action, word and tacit agreement of the Prophet (S) are treated as sources of legislation. The clear instructions given out by the Prophet (S) to purchase the land to build a mosque, his participations in its construction and his decision to build his dwellings adjacent to the mosque's *fina'* (open space) are indications that his actions were based on revelation from Allah. The prophetic nature of Muhammad's actions is reinforced in the Qurán in Surah An-Najm, verses 3-4: "He does not speak of his own desire. It is only inspiration that is inspired".

Ibn Hisham quoting Ibn Ishaq in *Al-Sīrah Al-Nabawiyyah* (Hadīth 2/116):

> 'And *Rasul Allah* (The Prophet of Allah) (S) lived with Abu Ayyub until his mosque and his house were built; and *Rasul Allah* (S) himself participated in building them so that people are inspired to follow him work.' (Ibn Kathir 2/381, p. 606)

The fact that the Prophet (S) himself participated in the mosque's construction is clear indications that he had wanted his actions to be emulated. Despite Muhammad (S) being a well-travelled man with knowledge of the existing religious houses and temples, the criteria set out for the mosques spatial planning and hierarchy were unprecedented. Through the basic setting up of the Prophet's Mosque, he has laid out the most fundamental example of the various functions expected of a mosque. The design of the mosque with various levels of spatial hierarchy, together with different qualities of spaces introduced by means of interplay of volumes and enclosure types, serves as embryonic template for future mosques.

The founding of the Prophet's Mosque is a mark of the beginning of a new tradition in Islamic building. It is a religious house which is meant to be emulated by Muslims of various regions and ethnic identities; as Islam is revealed as a universal faith system and not exclusive for the Arabs. The *Qurán* underlines the nature of Muhammad's mission especially in these verses:

> 'And We have not sent you (O Muhammad) except as a giver of glad tidings and a warner to all mankind, but most of men know not' (34: 28)
>
> 'And We have sent you not (O Muhammad) but as a mercy for the *'Alamin* (mankind, jinn and all that exists)' (21: 107).

Regardless of cultural background and climatic-regional conditions that the Muslims live in, the Mosque of the Prophet (S) serves as a model for a mosque design as it is a physical implementation of the intents of the *shari'ah* (Islamic law). As this mosque outlines only the essential components related to liturgical and social requirements, it accommodates for various possibilities in design interpretation and architectural choice with regards to intended functions and social requirements.

3.4.2 A Mosque is a Public Building

A mosque is a public building which cannot be privately owned (Al-Zarkashy, 1384H, p.385). Despite sharing the same walls, the Prophet's Mosque and the Prophet's houses are two distinguishable entities with separate characters and functions. Many prominent scholars such as K.A.C Creswell (1989, pp. 4, 6); Dogan Kuban (Frishman 1994, p. 77); Oleg Grabar (1973, p. 102) and Robert Hillenbrand (EI2,Vol.6/Masdjid, p. 679) have suggested that the genesis of mosque architecture is found in the private house of the Prophet (S) which was fundamentally a courtyard house.

This suggestion is contradictory to the information gathered by this study in the Prophet's *sirah* (history) through the works of classical scholars such Ibn Hajar Al-'Asqalani in *Fath al-Bari*; *Al-Bidayah wa al-Nihayah* by Ibn Kathir; *Al-Sirah al-Nabawiyyah li Ibn Hisham* as well as various exegeses pertaining to liturgical commandments. The Prophet (S) house and his mosque are separate entities, and the mosque is a purposely-built religious house with distinctive functions and characteristics.

The basis for these distinctions is found in several aspects.

Ibn Kathir narrated in *Al-Bidayah wa al-Nihayah* after the chapter on the merit of the Prophet's Mosque, under the topic discussing the house of the Prophet (S), he said;

> 'And the (people) built for the Prophet (S) rooms (*hujr*) surrounding the revered mosque; so that the rooms become dwellings (*masakin)* for him and his family. The dwellings were built low, close to the courtyard.' (Ibn Kathir 2/386, p. 613)

The narration indicates that the house of the Prophet (S) is built after the construction of the mosque is completed.

Distinction is also found in the scale of the mosque and the dwellings. Al-Suhayli recorded in *Al-Raudh Al-Unf* (2/248) that the Prophet's house was made of woven palm leaves in some parts and stone walls in some area. The roof material is mainly made of palm leaves. Hasan Al-Basri also mentioned how he was able to reach the ceiling of the Prophet's house when he was small, indicating that the roof height of

the house was low. In contrast, the mosque especially the covered area of the *bayt al-salat* has high ceiling heights - as high as the dates palm trunks.

Based on Sauvaget's reconstructed plan, the size of the Prophet's house was approximately 4 by 8 meter; while the size of the mosque with its courtyard was approximately 56 by 53 meter. At completion, the ratio of the house of the Prophet (S) to the mosque's area was only 1 per cent. Even after the addition of seven other houses belonging to the Prophet's wives, the total size of the houses is only 35 by 4 meters which is less than 5% of the total area of the mosque (Figure 3-1).

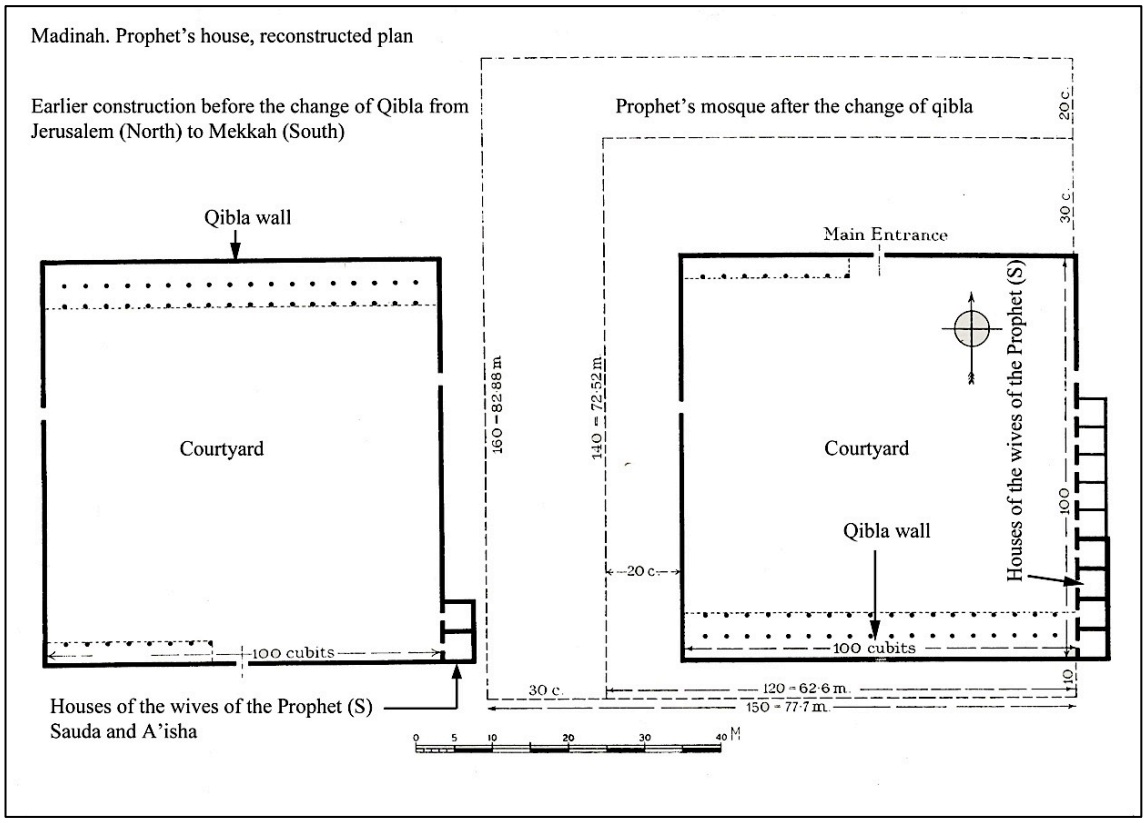


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Figure 3-1 Plan of the Prophet's mosque

Given the fact that the whole of the Prophet's actions are *sunnah* (tradition) and interpretation of Islamic laws as prescribed in the *Qurán*, his life – both public and private – serves as example (*uswah al-hasanah*) to be followed by the Muslims. Within this context, it is rational to believe that a very big portion of his life is made public to be witnessed by the Muslims to be exemplified; and only a very small portion of his life – especially related to married life – is kept private. Such proportions are indicated by

the floor plan area whereby most of his public life sits outside of the living quarter of his wives – which measures not more than 4 by 4 meter each – a relatively small size even for a normal room.

From legislative perspective, Islam has different set of rules for private and public spaces. The mosque is a public space which requires no permission to enter, while the house is a private space requiring prior permission. In the *Qurán* Surah An-Nur: 27-8 a condition for entering a private house is set in the verses:

> 'Oh you who believe, enter not houses other than your own, until you have asked permission and greeted their inhabitants. That is better for you, in order you remember. And if you find no one therein still, enter not until permission has been given. And if you are asked to return (leave), then return. That is better for you, and Allah is knowledgeable of all that you do.'

In contrast, the mosque is a publicly owned building (Al-Zarkashy, 1384H, p. 385) which requires no prior permission to enter. The verse in Surah An-Nur: 29 further strengthen this concept:

> 'There is no sin for you that you enter (without taking permission) houses uninhabited (i.e. not possessed by anybody), in which you have some possessions. And Allah has knowledge of what you reveal and what you conceal'.

Moreover, the mosque's sanctity is guarded by several liturgical requirements which have been discussed above. A private house in contrast is not. In fact there are many activities which are normally done in a private house which, if preformed in a mosque, will violate its sanctity. Thereby it is unthinkable that the Prophet (S) would have made his private house as a public space disregarding all the regulations set in Islam differentiating private to public life.

However, it is most likely that he has purposely built his house adjacent to, or within the mosque's compound for several objectives; first is to set an example to future leaders of the *ummat* on how close the relationship of a ruler to the people is; second, so that the Muslims witnessed how he has lived his life despite having authority above them; and finally as suggested by Hasan Mu'nis that he has embodied the concept of the mosque as the political centre for the community (Mu'nis, 1981, p. 62); as evident in the mosques of Kufa, Basra and Fustat which followed closely the model of the Prophet's mosque whereby the house of the army's commander was built next to the mosque.

3.4.3 Inception and Development

According to tradition, when the Prophet (S) first arrived at the outskirt of Yathrib (old name for Medina), he resided in the village of Bani 'Amru ibn 'Auf during which time he built the mosque of Quba' (Masjid Quba'). Very little information is known regarding the inception of this mosque. Similarly the time taken in building this mosque is obscure as the information regarding the period of stay in Quba' is conflicting, varying from three, eleven, fourteen, eighteen and twenty five nights (Ibn Kathir 2/377, p. 598).

The Prophet's mosque was founded on almost a square plan (measuring approximately 63 meters in width and 70 meters in depth). It was in the form of a walled courtyard with covered porticos on the northern and southern sides. The walls were constructed using baked clays (*labin*) and stones in some area. The northern side at the time of inception was the *bayt al-salat* (prayer hall) which was the area parallel to the *qibla* wall *('arish al-qibla*). It was designed with twelve pillars (made of trunks of date palms) arranged in two rows with each row having six pillars, three on the left and three on the right. The pillars supported a flat roof made of dates palm leaves. The southern wall had the same design and size of covering, and this area was the living space for the *ahl al-suffah*.

There were three entrances to the mosque; one on each wall with the exception of the *qibla* wall. To the south-east on the eastern wall were the houses of the Prophet's wives. At inception, there was only one house built for Saudah. Later another house was attached to it, and it was built for 'A'isha. The houses were in the form of small cubicles with access from the mosque's courtyard. Each house has only one room each built with walls made of latticework and low ceiling heights (Mu'nis, 1981, p. 61).

During the life of the Prophet (S), the mosque was enlarged 10 cubits to the east and 20 cubits to the west. During the rule of Abu Bakar (r.a), he replaced the pillars with new trunks on the same design. In 17 H, 'Umar al-Khatthab (r.a) replaced the pillars with stone pillars, and renewed the roof materials. The mosque was enlarged to the size of 130 by 120 cubits. It was reported that when Umar (r.a) enlarged the Prophet's mosque he said, "Give the people shelter from the rain, but take care not to

make them red or yellow lest you lead the people astray" (EI2, Masdjid: Ibn al-Fakih, p. 100).

In 69 H, during the caliphate of 'Uthman bin 'Affan (r.a), significant upgrading was done to the mosque. The mosque was enlarged to the size of 130 by 160 cubits and the height of the walls (thereby the ceiling in prayer hall) was increased. Windows were added to the upper part of the walls on the right and left of the *bayt al-salat*. The old walls were replaced with plastered carved stones with stuccos. The pillars were made of carved stones and the roof material was made of teak wood (Mu'nis, 1981, p. 61).

During Al-Walid I's rule (705 – 15 C.E.) he commanded an extensive renovation to the Prophet's mosque. This new mosque with its *sahn* (open courtyard) surrounded by *riwaqs* (arcade or colonnades) reinforced the archetype of the Prophet's mosque in form; however it was extravagant in its decoration and choices of materials. It was reported that the Byzantine emperor sent mosaic material to decorate the mosque together with a group of artisans (Creswell, 1969a). The stone walls were decorated with marble facings, mosaic, gilded paintings and *Quranic* calligraphy in gold on a blue background. Marble columns supported the timber roof. For the first time a *mihrab* was introduced on the *qibla* wall and four minarets were constructed at the corners of the mosque. According to Al-Zarkashy, the *mihrab* was in the form of a concave-niche, the axial-nave, decorated with precious stones with a cupola over the bay in front of it (Bisheh, 1979, p. 222).

During the rule of the 'Abasid caliph Al-Mahdi III, he rebuilt the mosque based on Uthman's model with an increment of 60 cubits to the north with added ornamentations to the northern wall. The elemental design of the Prophet's mosque remained much unaltered when Ibn Jabir paid tribute to it four centuries later in the year 580 H/ 1184 C.E. He describes, "It measured approximately 165 by 225 cubits and the mosque consists of a large courtyard which is surrounded by *bayt al-salat* on the *qibla* side, back wing which was opposite of the qibla wall, and two side wings on the east and west. The depth of *bayt al-salat* was 5 *asakib* and the length is 18 *balathah* made up of 17 rows of columns. The eastern wing has 3 *riwaq*; while the western wing has 4. The total numbers of columns are 290 (Mu'nis, 1981, p.65).

3.5 Determinants of Design in the Prophet's Mosque

3.5.1 Mosque's Sanctity Requirements

There are two fundamental elements that define a mosque; the *qibla* and the designated space for *salat*. Besides the *qibla*, establishing the boundary of the designated space is also important as it marks the beginning of specific rituals and socio-religious activities allowed pertaining to the mosque's sanctity. Historically, the space designated for a mosque was designated either with a line on the ground (such as in a *musalla)*; surrounding walls (such as in the mosque of the Prophet (S)) or trenches (such as in the mosque built in Kufa) (Farid Shafi'i, 1970, p. 237).

The selected site must be cleaned and levelled. It is permissible to build on the site of old graveyards or cattle farms; as long as the ground is cleaned and the impurities are taken out of the designated site (Al-Zarkashy, 1384H, p. 381). However it is disliked (*makruh)* to build the mosque in the middle of a cemetery or in between two burial grounds (Al-Zarkashy, 1384H, p. 356).

Once the boundary of the mosque is marked, it demarcates the profane from the sacred. The critical importance of the zoning in a mosque planning is demonstrated in *I'lam as-Sajid bi Ahkam al-Masajid*, when the classical scholars were of various opinions regarding the definition and the status of *rihab* and *sahn* of the mosque. The origin of their differences lies in the interchangeable application of the words *rihab*, *sahn* and *fina'*(all carrying the meaning of open space or courtyard) whether it is located outside of the mosque's boundary i.e. surrounding the mosque's building; or whether it is inside the mosque as an open courtyard thereby claiming the same status as the mosque.

Al-Bindunaiji defined *rihab* as 'the area that is built in the mosque's proximity'. Al-Qadhi Abu Thayyib said it is '(the area) surrounding the mosque'. According to Ibn as-Sibagh and al-'Imrani *rihab* is 'the area which is added to the mosque and paved (covered with stone slabs)'. They were of different opinions regarding the position of the *rihab* whether *salat* performed therein is accepted as being part of the congregation and whether it claims the same status of sanctity as the mosque (Al-Zarkashy, 1384H, p. 346).

Fortunately, through studying several *ahadīth* pertaining to the Prophet's Mosque, the characteristic and function of this open space is highlighted. The *hadīth* regarding the construction of the Prophet's house indicated that the house was '*qasirat al-bina' qaribat al-fina'* i.e. built low (in heights) and close to the courtyard (*fina'*) (Ibn Kathir 2/386, p.613). In a *hadīth* narrated by An-Nasa'ie in *Jami'al-Usul 3/615,* 'Umar bin Al-Khathab was said to have found his son 'Asim playing in the *fina'* (courtyard) of the mosque (Al-Washli, 1990, p. 46). Under the topic of *'Judiciary ruling and oath of condemnation in the mosque',* Al-Bukhari narrated on how Al-Hasan and Zurarah bin Abi Aufa used to pass rulings '*fi al-rihbah kharijan 'an al-masjid'* in the *rihbah* (singular for *rihab*) outside of the mosque (Al-Washli, 1990, p. 61). 'Aisha (*r.a*) said, 'When we were performing *i'tikaf* and the women had their menses, the Prophet (S) ordered them to leave the mosque, and to set their tents in the *rihbah* of the mosque until they are clean' (Al-Zarkashy, 1384H, p. 383).

Al-Sheikh Abu Hamid distinguished the difference between the terms when he clarified that trading activities were only permissible *''bi al-rihab al-afniah al-kharijiyyah 'an had al-masjid''* (Al-Zarkashy, 1384H, p. 395) at 'the open space (*rihab*) of the building outside the boundary of the mosque'. The distinction between *rihab* and *fina'*or *sahn* facilitated in defining the zones existing within the mosque's site planning. The *rihab* is the area surrounding the mosque, which is also defined by Al-Mawardi as *harim al-jawami wa al-masajid* (*haram* of the mosque) (Al-Mawardi, 450 A.H, p. 236). *Sahn* is the open area (*fina*') found inside of the walls of the mosque (Mu'nis, 1981, p. 70).

Al-Rafi'i classified *rihab* as the easement provided around the mosque for trading activities as it is well known that trading is prohibited inside the mosque (Al-Zarkashy, 1384H, p. 346). According to Al-Mawardi, granting easement surrounding the mosque for trading activities to be performed is only allowed if such activities do not cause disturbance to mosque-goers (Al-Mawardi, 450 A.H, p. 236). Majority of the jurists however considered that only socio-religious activities are allowed in the *rihab* because *rihab* is part of the mosque (Al-Zarkashy, 1384H, p. 346). Some jurists were of the opinion that it is also not allowed to plant trees in the *rihab* (Al-Zarkashy, 1384H, p. 341) as the open space may be used as additional prayer space when the need arises (Mu'nis, 1981, p. 70).

Based on these descriptions, depending on the design of the mosque, the area outside of the *haram* (*rihab)* of the mosque is considered as the profane zone. The *haram* of the mosque – depending on the design – may be used for praying when the congregation is large (Al-Zarkashy, 1384H, p. 346; Mu'nis, 1981, p. 70), as tents site for women when they are having their menses during *I'tikaf* (Al-Zarkashy, 1384H, p. 383) and to have feast (Al-Zarkashy, 1384H, p. 346). It is prohibited to have trading activities in the *rihab*; based on the most popular opinion (Al-Zarkashy, 1384H, p. 394); and to use the *rihab* as a trespass (Al-Zarkashy, 1384H, pp. 355-6).

The *sahn* or *fina',* which is located within the mosque's walls, may be used for socio-religious activities which do not interrupt the established ritual activities of the mosque. Activities performed in the courtyard of the Prophet's Mosque include setting up temporary tents for visitors (Al-Washli, 1990, pp.76, 88); tents for the injured in a war and a tent for the nurses (Al-Washli, 1990, p. 63); quarters for the homeless (Al-Washli, 1990, p. 63); a playing ground for children (Jami'al-Usul 3/615); a place to display techniques of war in shield and lance (Ibn Hajar al-'Asqalani, 1989, Vol.1, p. 722); and to distribute alms and charity (Al-Zarkashy, 1384H, p.385). With regards to ablution activities; it is permissible to perform it inside the mosque (Al-Zarkashy, 1384H, p. 311), probably in the *sahn,* or outside of the mosque in its *rihab* (Al-Zarkashy, 1384H, p. 383) as long as the ablution space is properly designed so that water spilled would not wet the prayer area.

The *bayt al-salat* – which houses the *mimbar* and *mihrab* - is the core of the mosque where ritual activities are carried out. This area is covered to shield congregation members from rain (Ibn Hajar al-'Asqalani, 1989, Vol.1, p. 709). It is preferred to have the *mimbar* to the left of the *qibla* (Al-Zarkashy, 1384H, p. 373) and it is disliked (*makruh*) to have a large *mimbar* as the *mimbar* takes up unnecessary space of the prayer hall (Al-Zarkashy, 1384H, p. 374). It is disliked (*makruh*) to raise voices and make noise in the mosque especially in this area (Al-Zarkashy, 1384H, p. 326); to bring in children, animals or people with mental disorder who do not recognise the sanctity of the mosque for fear of polluting the mosque with impurities (Al-Zarkashy, 1384H, p. 312). Spitting is prohibited in the mosque (Al-Zarkashy, 1384H, p. 308) as it is forbidden for people who are in the state of *janabah* (ritual impurity) to sit in the mosque (Al-Zarkashy, 1384H, pp. 314-318). The mosque in general can be used for permissible activities such as having study circles (Al-Zarkashy, 1384H, pp. 327-8);

social meetings (Al-Zarkashy, 1384H, p. 315); having small meals such as bread (Al-Zarkashy, 1384H, p. 329); rest and sleep (Al-Zarkashy, 1384H, pp. 305,330) (Figure 3-2).

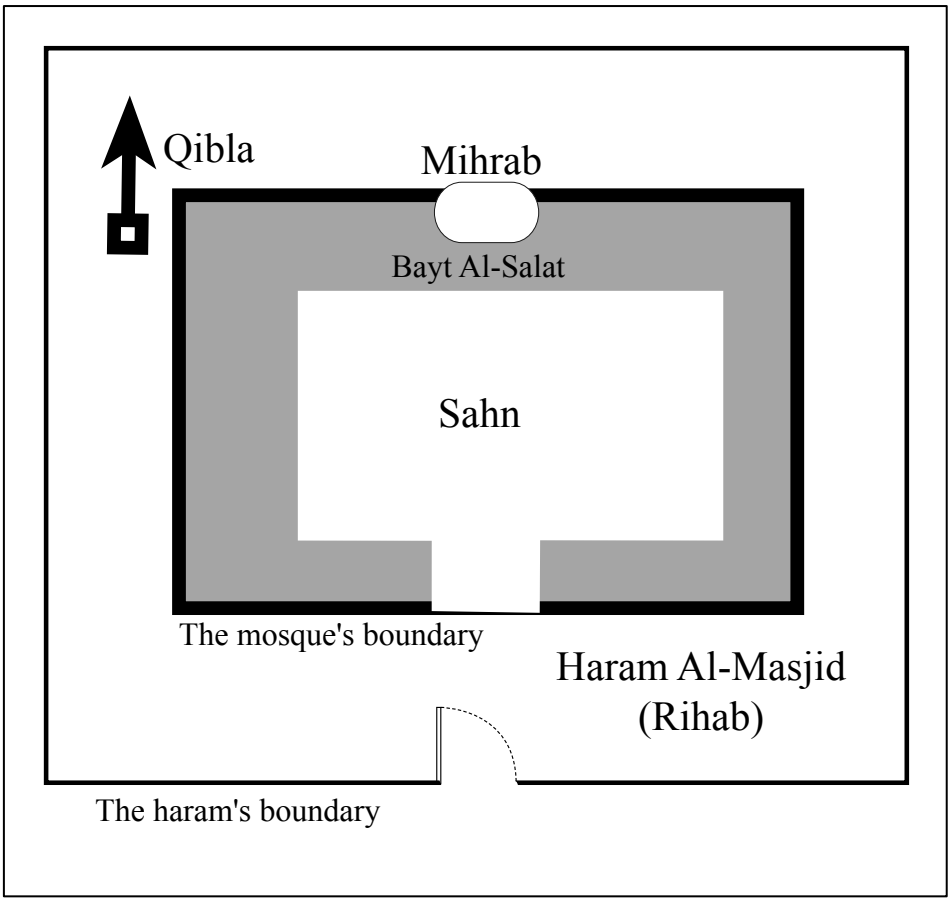


Figure 3-2 Spatial planning of the Prophet's Mosques

3.5.2 Liturgical Requirements

3.5.2.1 Requirements of Entry

It is disliked (*makruh*) to enter the mosque without *wudhu'* (performing ritual purification i.e. ablution) (Al-Zarkashy, 1384H, p. 304) as it is preferred to perform salutational prayer (*salat tahiyyat al-masjid*) (Al-Zarkashy, 1384H, p. 350) once the person has entered the mosque, before embarking on any other activities. As such it is preferred to have the place for ablution either close to the mosque (Al-Zarkashy, 1384H, p. 383) or inside the mosque (Al-Zarkashy, 1384H, p. 311) close to *bayt al-salat.*

3.5.2.2 Requirements of Congregational Prayers

Congregational prayers are performed with the *imam* standing in front of the *ma'mum* (the followers) in the central space near the *qibla* wall, while the *ma'mum* stand in perpendicular rows *(saf)* to the *qibla* axis. It is a condition of congregational prayer that these *saf* must be continuous, that there should not be any space between one person to the other in the *saf,* and that the *saf* should not be broken by walls (Ibn Hajar al-'Asqalani, 1989, Vol.1, p. 760). It is also a condition where possible, that a mosque must be large and provide comfort to the mosque goers (Al-Zarkashy, 1384H, p. 343) since praying in a congregational mosque (*masjid al-jami'*) carries more merits than prayers in a small mosque due to the number of congregation (Al-Zarkashy, 1384H, p. 376).

This arrangement requires the prayer hall to accommodate for the expansion of the *saf* in linear directions by providing ample space either parallel to the *saf* lines (i.e. expansion of the length of the *saf)* or parallel to the *qibla* axis (accommodating more *saf* i.e. expansion in length, in the direction of the *qibla* axis). As the *ma'mum* are expected to stand in uninterrupted rows without any gaps in between them (where possible), the prayer hall is expected to have minimum physical obstructions that could break the *saf*. The *saf* requirements alone dictate that the prayer hall should ideally have several critical criteria such as an efficient floor plan and size; an open plan scheme with minimum column interruption; and convertible spaces that could be adapted to various socio-religious functions.

As the *saf* are made of *ma'mum* standing in straight rows, the shape of the floor plan which comfortably caters for such arrangement is either a rectangular or a square. The early mosques in Islam were found to have square or rectangular floor plans as these are the most workable forms that are able to accommodate for the linear arrangements required of the mosque's spatial organization. The rectangular and square floor plans essentially alleviate any kind of confusion with regards to alignment of *safs* and functionality of spaces within the prayer hall. Floor plans in the forms of a circle or an octagon which emphasizes the centre-inner space are unsuitable and functions less-effectively.

In order to provide an open plan scheme, the prayer hall requires a structural and constructional system which enables the roof to span over an open space plan with minimum column interruptions. The open plan concept should also be designed to allow for good audio and/or visual reception of the acts of the *imam* and the *khatib* (the one who gives sermons).

As the size of the congregation differs depending on the ritual activities; whether it is daily congregational prayers, Friday prayers or *Salat al-'id;* the mosque is expected to be able to contract and expand to cater for the variety of activities. For this reason, the Prophet's Mosque served as the best model in space planning as the *bayt al-salat – sahn – rihab* configuration provided the flexibility while at the same time providing each zone with its unique architectural qualities which are seen employed and developed successfully in early mosques such as in Damascus, Qairawan and Cordoba.

3.5.2.3 Socio-Religious Activities as Determinants of Functional Spaces

As the mosque evolved from being merely a prayer space to a communal centre, it is expected to accommodate for the various types of users. As highlighted by many *ahadīth* in the discourses of Muslim scholars, it is an essential liturgical requirement that the guests of the houses of Allah received proper treatment and should be serviced accordingly. Although the Prophet (S) himself did not put down any preconditions regarding the design of a mosque; the Islamic rules pertaining to the use of the mosque's space demands that functional spaces are provided adequately for the men, women and children that use the mosque at various intervals.

Apart from the core devotional activities; many of the mosque's permissible activities are related to the function of a mosque as a community centre. The difference in the nature of activities taking place in the mosque was adequately represented in the Prophet's Mosque's spatial organisation and architectural treatment of four major elements of the mosque: the *bayt al-salat*, the courtyard (*sahn*), the southern (later northern) portico and the mosque's *haram* (*rihab*).

The covered *bayt al-salat,* with its rows of pillars, emphasizes the *qibla* axis and consequently enhanced the devotional atmosphere as one's attention is directed towards the *qibla* wall, its *mihrab* and *mimbar*. In contrast the open space of the *sahn* which form is defined by the bounding arcades of the *bayt al-salat* and the perimeter walls serves as a vast neutral zone which inadvertently alleviates the feeling of centrality or axiality thereby is found most suited to be used for social activities. Historically children used to play in it (Al-Washli, 1990, p.46), and the Abyssinians used it as a stage to demonstrate their shield and lance war tactics. It was also in the *sahn* that water fountains were built – both for decoration as well as for ablution purposes. In Fustat for example, Usama bin Zayd, who was the director of finance in 715/6 – 717/8 C.E., built a dome (*kubb*a) with pillars and located the *bayt al-mal* in it (EI2, Masdjid: Ibn al-Fakih, p. 131). In the Mosque of Damascus, the *bayt al-mal* was located in the cupola built in the *sahn*. Although at present the *bayt al-mal* is extinct, the cupola is still called *kubbat el-khazne* (treasure-cupola).

The half covered portico of the south was used as shelter for the homeless. It was conveniently located near the main entrance so as to raise awareness amongst the mosque-goers of the presence of the needy and the poor of the society. In later improvements of the Prophet's Mosque's model, as found in the reconstruction done by Al-Walid I with addition of one bay of right and left wing to the *sahn,* the partially covered area of the wings were most probably used for other social related activities such as a covered shed for people sleeping, talking and watching cultural display taking place in the *sahn.*

The mosque's *haram* is a transitional space from the profane to the sacred zone of the mosque. It defines the boundary of the mosque, and depending on the design, could be used for prayers when required.

3.6 Essential Architectural Qualities of the Prophet's Mosque

Based on the evidences presented from Islamic sources, the Prophet's Mosque prototype is distinguished by several distinctive qualities such as:

- A designated space marked with fence, walls or trenches demarcating between sacred and profane.
- Floor plan of the area is usually rectangular or nearly square
- Single storey open plan
- *Bayt al-salah* designated to the area parallel to the *qibla* wall with the roof covered
- The rest of the space within the walled area is left open – forming an open courtyard (*sahn*)
- Covered left and right wing may have been introduced to the sides of the courtyard as further extensions of covered prayer hall

The covered area is supported by round columns forming bays. In classical sources these bays are used as reference units which are used to describe the width and depth of the covered area. Terms such as *riwaq* (portico), and *uskub* (p. *asakib* – bays formed perpendicular to the *qibla* wall) were used to describe the size of the covered area (Mu'nis, 1981, p. 65).

The numbers of bays in *bayt al-salah* and in the wings, and the width of these bays resulted in variations of design from one mosque to the other. For example, in the Umayyad Mosque in Damascus, Al-Walid bin 'Abd al-Malik (in 96H/ 714 C.E) enlarged the main bay extending perpendicularly from the *mihrab* thereby introducing a transept in the *bayt al-salah* , while the right and left wings only had one *riwaq* (Farid Shafi'I, 1970, p. 243).

3.7 Mosque Elements and Design

The *mimbar* (or *minbar*) was the first element known to be introduced in the time of the Prophet (S). Originated from the root word of ن- ب-ر (n-b-r) "high", it means "elevation" or "high" (EI2, vol. 7, *Minbar*). According to Ibn al-Athir, the companions suggested to the Prophet (S) that he should take up a raised position when greeting and addressing the foreign delegations. Various narrations recorded how this *mimbar* was introduced. The Prophet's *mimbar* was called *a'wad* (Al-Bukhari, Salat, Bab 64) and consisted of two steps and a seat (EI2, vol. 7, *Minbar*; Al-Bukhari, *Djum'a* Bab 23; Al-Tabari: Mak'ad I, p. 1591). It was made of wood species of *tarfa* or *tamarisk*; and was built by a Byzantine or Copt slave. After the time of the Prophet (S), the three caliphs: Abu Bakr (r.a), Umar (r.a) and Uthman (r.a) used the *mimbar* the same way as the Prophet (S) did.

After the time of the Rightly-guided Caliphs; the *mimbar* of the Prophet (S) became emblematic as a throne signifying authority. Mu'awiya was reported to have tried to bring the Prophet's *mimbar* to Damascus from Medina, but he was not allowed to do so. However he made an alteration to the *mimbar* by increasing the steps from 2 to 6. It was reported that 'Abdul Malik and al-Walid similarly tried to take the *mimbar* during their rule to be brought to Damascus (EI2*, Minbar*: Al-Tabari, ii, pp. 92-3; Ibn al-Fakih, pp. 23-4).

The leader of *salat* and *mimbar* became analogous to authority as indicated by the term *"mimbar al-mulk"*. Other expressions used by classical scholars to describe governors or leaders such as 'He was appointed '*over salat and sword'*; or 'He had '*province and mimbar under him*' (Al-Tabari, iii, p.860); or *wilayat wal-khutba* (leader of the province and in *khutba*) (EI2, Masdjid: al-Mukaddasi, p. 337).

Mu'awiya was reported to have a portable *mimbar* that he brought with him in his journeys when he wished to make public appearance. According to Ibn Khaldun, Mu'awiya was the first in Islam to introduce the throne which he allocated at the central nave where the *maksura* was in the mosque (Ibn Khaldun, 2005 ed., pp.205-6). During the time of al-Rashid he was presented with a carved wooden *mimbar* by the governor of Egypt in 786-7 or 790-1 C.E.; and this *mimbar* had nine steps. All of the early *mimbars* seemed to have been built in wood and were movable. However as time

progressed, its form and material changed. *Mimbars* were known to be made of iron during Umayyad's time, built of stone and marble; as well as bricks.

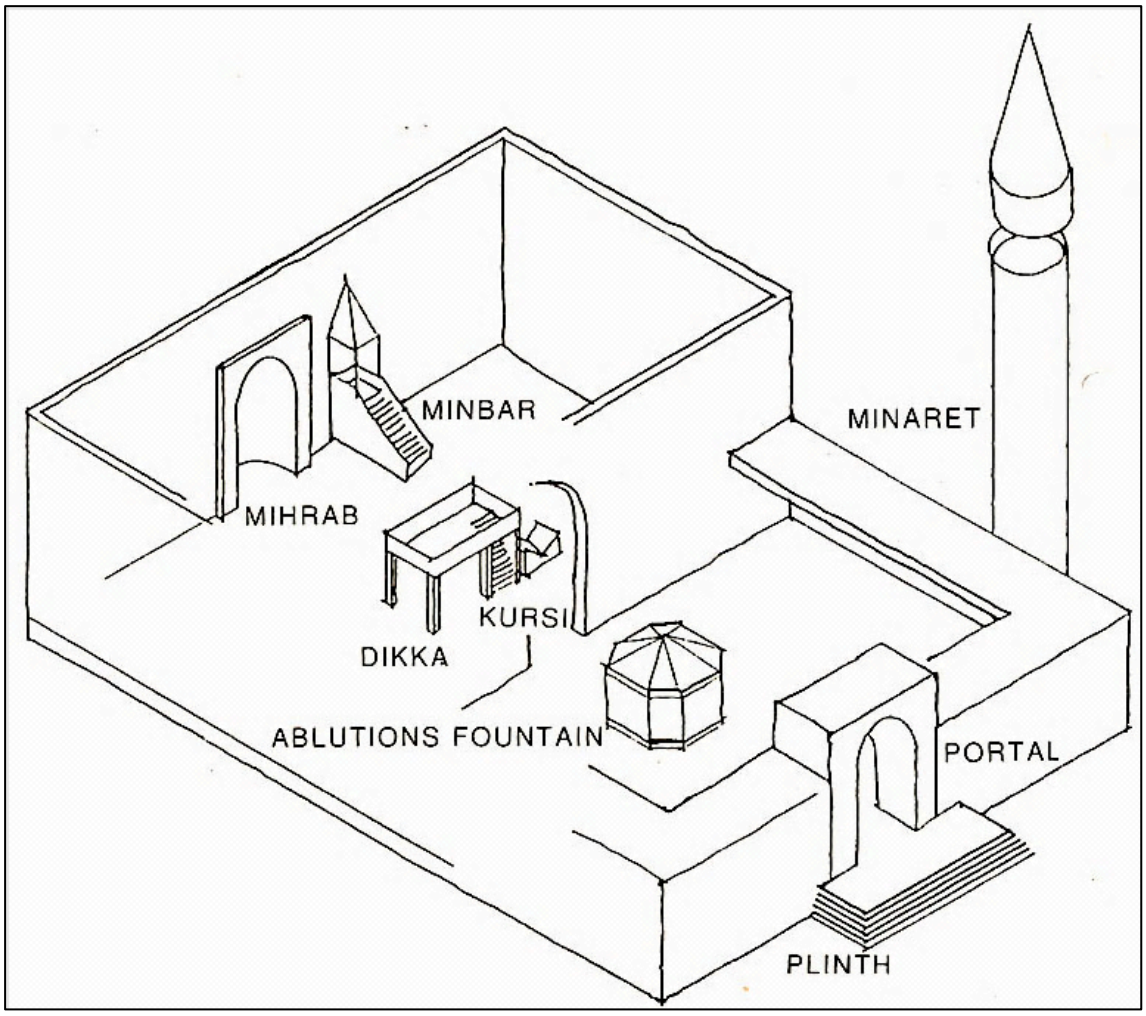
The *mihrab* held the dual function of indicating the direction of the *qibla* as well as being the most prominent space dedicated for the one who leads the congregational prayer. In the early days of Islam, the *mihrab* in the form that is known today i.e. as an apse, a niche or a doorway in the wall; did not exist. During the time of the Prophet (S) the direction of *qibla* was indicated by a stripe of paint or a block of stone embedded in the *qibla* wall (EI 2, Vol. 7, *Mihrab*). Even after the time of the Prophet (S) when 'Amr bin al-'As built the Fustat mosque (641-2 C.E.) there was no mention of a hollow *mihrab*.

According to Al-Zarkashy, the first *mihrab* was introduced by 'Umar bin 'Abd al-'Aziz when he was appointed by al-Walid to oversee the reconstruction of the Prophet's mosque in Medina (Al-Zarkashy, 1384H, p. 363). In Al-Walid's expansion of the Prophet's Mosque (707-10 C.E) the *mihrab* was decorated with precious stones was in the form of a concave-niche, the axial-nave, and with the cupola over the bay in front of it (Bisheh, 1979, p. 222). After that; semi-circular *maharib* (pl. *mihrab*) rapidly spread throughout the Muslim world.

The first minaret to be recorded was during the time of Ziyad bin Abihi, the governor of Iraq in 655 C.E. when he added a stone tower next to the mosque in Basra. It was during the time of Mu'awiya that the minaret gave the *adhan* its physical and monumental expression; almost in an effort to rival the existing fine stone church towers that existed in Syria during that time. In 673 C.E, the Umayyad governor of Egypt demolished the Mosque of 'Amr with Mu'awiya's permission (EI2, Vol. 6, Manar). Although few details were recorded regarding the new mosque, it was without doubt the first mosque that incorporates four minarets at its corners; built according to the planning of Mu'awiya. During al-Walid's rule, similarly, the Prophet's mosque in Medina was rebuilt and constructed with four minarets placed at its corners.

The *dikka* (or *dakka*) is a platform used by the *muezzin* to recite the second *adhan* in the mosque at the beginning of Friday prayer. The *muezzin* will call the first *adhan* by going up the minaret, and when the *adhan* is completed he will enter the mosque and ascend the *dikka* to proclaim the second *adhan*. This practice however was not recorded in the earlier periods and the introduction of *dikka* as a mosque element

came later in Islamic history. In Makkah, the second *adhan* was uttered from the roof. During the reign of al-Rashid, he built a little hut *(zulla)* on top of the roof for this purpose. In Cairo, the *adhan* was uttered from a chamber *(ghurfah)* located on the roof. In the Mosque of Ibn Tulun, the *adhan* was proclaimed from the cupola located in the courtyard (al-Maqrizi, 1306/ 1888). Ibn al-Hadjdj (14c) condemned the introduction of *dikka* in mosques as *bid'ah* (unlawful innovation) as it unnecessarily prevents freedom of movement within the mosque (Figure 3-3) (EI2, Vol. 6, Masdjid).



SOURCE: (FRISHMAN & KHAN, 1994)

Figure 3-3 Mosque elements

The *maksurah* was said to be firstly introduced in the mosque by Mu'wiyah either in the year 660 or 664 C.E after an assassination attempt by a Kharijite fanatic (Al-Tabari: 5/149; al-Suyuti, *Tarikh al-khulafa*, p. 175). It is a railed off area in the mosque, near the *mihrab* exclusively for the ruler and designed to separate the ruler

from the congregation. Some scholars like al-Hasan and Bikra al-Muzni considered it as a *bid'ah* (Al-Zarkashy, 1384H, p. 375).

Over the years the *maksura* served other functions than initially intended. It was a place where the ruler could hold consultations with leaders of communities; a place where the *muezzin* stood up and called the second *adhan* (i.e. the *iqamah*). Ibn Djubayr mentioned the existence of three kinds of *maksura* in the Damascus Mosque: one built by Mu'awiya in the eastern part of the mosque; one built in the centre and contained the *mimbar*; another one built in the west dedicated for the people of Hanafi[41] to conduct lessons and prayers (EI2, Vol. 6, Masdjid).

Maksura also came in the form of small rooms and compartments within the main hall of the mosque demarcated by wooden lattice. These forms of *maksura* were known as *zawiy*a (corner or compartment) as well as *madrasa* (place to study). These compartments were used for study circles where students and jurists used to sit (EI2, Masjid: Madkhal, ii, p. 44). Examples of these were found in the al-Azhar Mosque of Cairo and the Aqsa Mosque in Jerusalem. In the latter three *maksuras* were constructed in 912-913 C.E for women to perform *salat* and conduct study circles (EI2, Masdjid: Ibn al-Fakih, p.100).

The jurists have different opinions regarding the inclusion of architectural elements such as the *mihrab, minaret, mimbar* and *maksura* in the mosque as some of them were not present during the Prophet (S)'s time. Al-Zarkashy in discussing the *mihrab* considers that there is no need to have an *ijtihad* on it as its presence in the mosques of Medina, Kufah, Basrah, Sham and Baitul-Muqaddis (Jerusalem) were known and the Prophet (S) and his companions have prayed in some of them (Al-Zarkashy, 1384H, pp. 362-3). His concern was on people taking for granted that the *mihrab* as indicative of the direction of *qibla*; in which he commented, "… (The concave *mihrab*) was placed by person who has no knowledge of this art …" It was discovered years after they were built that the *qibla* for the mosques of Amru bin 'Ash in Cairo, al-Thuluni as well as al-Shafi'e were deviated from the correct *qibla* (EI2, Masdjid: Ibn al-Fakih, p. 113).

[41] Madhhab Hanafi: the school of thought of Muslim scholar and jurist: Imam Abu Hanifa

Some scholars considered the *mihrab* to be *makruh* (disliked) as it imitates the Christians and a form of reproduction of the apsidal-niche of the Christian churches. Ad-Dhahak bin Muzahim was reported to call the *mihrab* 'The first sign of *shirk* (polytheism) committed by the people of prayer' (Al-Zarkashy, 1384H, p. 364).

Al-Suyuti in his work entitled *"I'lam al-Arib bi Huduth Bid'at al-Maharib"* considers *mihrab* to be *bid'ah* introduced into the mosques; since it existed neither in the time of the Prophet (S) nor in the period of the first four Rightly Guided Caliphs and their successors (Bisheh, 1979, p. 259). The early sources however, recorded not the slightest objection to the appearance of the first *mihrab* introduced by Umar bin Abd al-Aziz*,* which suggests that the *mihrab* met the approval of the Muslim community at that time. Furthermore, 'Umar bin Abd al-Aziz was well-known for his piety and would not have proposed an innovation contradictory to the spirit of revelation. Some of the pious men, like Hasan al-Basri (d.728 C.E), al-Nakha'I (d.714 C.E) and Ibrahim al-Tamimi (d. 714 C.E) however, have all refrained from praying in the *mihrab* (Bisheh, 1979, p. 260).

The construction of a *mimbar* to facilitate the hearing of *khutbahs* is considered praiseworthy *(istihbab)* by the scholars. The *mimbar* is to be built to the left of the *qibla* and to the right of the congregation when they are facing the *qibla* wall. An-Nawawi said it is to be located to the right of the *mihrab*. Al-Shaimiri said that there should be a distance of one or two arm-length between the *qibla* and the *mimbar* (Bisheh, 1979, p. 374).

The *maksura* was an innovation introduced in the mosque by Mu'wiyah either in the year 660 or 664 C.E after an assassination attempt by a Kharijite. It is a railed off or enclosed area in the mosque, near the *mihrab* exclusively for the ruler and separating the ruler from the congregation. Some scholars like al-Hasan and Bikra al-Muzni refrained from praying therein as it was considered a *bid'ah* (Al-Zarkashy, 1384H, p. 375). Over the years the *maksura* serves other functions than initially intended. It served as a place where the ruler could hold consultations with leaders of communities, as a place where the *muezzin* stood up and called the second *adhan* (i.e. the *iqamah*).

The minaret has evolved over time from being an instrument to proclaim the *adhan* to becoming the signature of the mosque, the visual marker of Muslim towns to a sign of power (EI2, Vol. 6, Minaret). Although the *hadīth* of the Prophet (S) clearly

indicated his dislike for tall and grand mosques as expressed in his saying, 'I have not been ordered to build high and lofty mosques' (Ibn Hibban); the developments of the minarets somehow were not seen to be related to this *Hadīth* and received little mention in the works of classical scholars.

3.8 Mosque Decorations

Due to several *ahadīth* that forewarned the Muslims against decorating the mosque, the classical scholars were of different opinions on whether or not it is permissible to decorate the mosque, and on what type of decoration that was allowed.

Ibn 'Abbas said: 'Indeed you will embellish the mosques [and decorate them] in a similar way the Christians and Jews did to their places of worship.'

Ibn Majah reported the following narration from the Prophet (S); 'I think that you are going to build large and magnificent windows to your mosques after my death in the same way the Jews did to their synagogues and the Christians did to their churches.'

A'isha reported: Umm Habiba and Umm Salama made a mention before the Messenger of Allah (S) of a church which they had seen in Abyssinia and which had pictures in it. The Messenger of Allah (S) said: When a pious person amongst them dies they build a place of worship on his grave, and then decorate it with such pictures. They would be the worst of creatures on the Day of Judgement in the sight of Allah (Muslim 4/1076).

According to al-Zarkashy, the jurists in consensus agreed that decorating, engraving and embellishing mosques are disliked *(makruh)* because the decorations distract the concentration of the worshippers (Al-Zarkashy, 1384H, pp. 335-8). Similar comments were given by Imam Malik and Ahmad in al-Muwaddanah (EI2, Vol. 6, Masdjid). It was reported that Ibn Mas'ud passed by a decorated mosque, and remarked, "Allah's curse to the one who embellish it as such; the poor are more in need (of provision) than the Sultans".

Al-Baghawi in his commentaries of the *sunnah* said, "It is forbidden to engrave the mosque since there is no wisdom in such actions." In *Fatawa* however he said, "If there is wisdom in it, then there is no harm – for Uthman (r.a) built the mosque with engraved plaster and stones". He further elaborated that if one were to decorate the mosque as a gesture of glorifying the symbols of Islam *(syi'ar),* then his acts should not be repudiated. Some jurists considered that embellishing a mosque is *bid'ah*; those who considered it permissible agreed that it is forbidden to decorate the mosque financed from endowment fund (Al-Zarkashy, 1384H, pp. 335-8)**.**

3.9 Mosque Typology

The ritual activities intended for the mosque naturally define the mosque types. During the time of the Prophet (S), the annual *Salat al-'Id* was carried out in a *musalla* (Al-Zarkashy, 1384H, pp. 385-6), which, due to its prescribed functions carry different rules and conditions to the normal mosque. *Musalla* (literally means 'a place of prayer') is an open space dedicated for the prayers of *'Id* and is placed outside of the city (Dickie 1978, p. 35). According to Abu Daud and Ibn Majah, the Prophet (S) has never prayed *Salat al-'Id* in a *masjid* (but in a *musall*a); except on one occasion when it was raining (Al-Zarkashy, 1384H, p. 385).

According to Al-Ghazali, the *musalla* is placed outside of the city to accommodate and facilitate the participation of tribe members coming from outside of Medina, riding on horses and camels with their family members including female and children. The regulations applied to the mosque which is connected to the mosque's sanctity and devotional activities hence are not applicable to the *musalla* as the *musalla* is designated only for *Salat al-'Id* (Al-Zarkashy, 1384H, p. 386).

Based on the socio-functional roles assumed, the mosques after the time of the Prophet (S) developed into different types. 'Umar (r.a), the second caliph was reported to have written to Abu Musa in Basra telling him to build two types of mosque: a mosque *lil'jama'a* (for congregation) and mosques for the tribes; but on Fridays the people were to come to the principal mosque. However in Syria, he was reported to have forbidden the building of tribal mosques to prevent the divisions of the *ummat* into oppositional groups (al-Maqrizi). Al-Tabari reported that during that time, the

expression 'the people of your mosque' *(ahl masjidikum)* became identical with 'your party' (EI2, Vol. 6, Masdjid).

According to al-Zarkashy a mosque is differentiated based on whether or not it is used for Friday prayers (Al-Zarkashy, 1384H). Al-Mawardi (14th century) dealt with the mosque in one of his chapters on the imamate; in which he recognized two types of sanctuaries: the first was the official ones which were controlled by the caliph or his representative. The second was mosques that belong to the people *('ammiyya)* which became the responsibility of those who built them. Al Maqrizi (d. 15th C.E) recognized two types of mosques; the term *masjid al-jami* (congregational mosque) was used for big mosques that held congregational prayers while the smaller mosques were simply called *masjid.*

Mosque also extended its functions as an important element in the Islamic urban fabric. Al-Maqrizi, the 15th century geographer; listed religious buildings in Cairo and identified the different types of *masajids, jami's, ribats, mashhads, zawiyas* etc (Grabar, 1973). Ibn Khaldun in his *Muqaddima* discussed the city mosques in the chapter dealing with imamate. He stated:

> It should be known that city mosques are of two kinds, great spacious ones which are prepared for holiday prayers, and other, minor ones which are restricted to one section of the population or one quarter of the city and which are not for the general attended prayers. Care for great mosques rests with the caliph or with those authorities, *wazirs,* or judges, to whom he delegates it (Ibn Khaldun, 2005 ed.).

As new civic centres were created through expansion; the mosque became the city identifier – as the case with Kufa, Basra and Fustat - to the extent that the city is defined by a single congregation mosque (Jami' Mosque) (Grabar, 2006). This main mosque (Jami' Mosque) was always located in the middle of the Islamic classical town surrounded by the business quarters or precisely *aswaq* (markets) (EI2, Masdjid, p. 656). The Dar al-Imara or administrative centre would frequently be within its immediate vicinity. Since the mosque was a communal centre, the areas around the mosque would be occupied with *suq* of various merchandises. Gradually both the mosque and the *suq* became the main focal points of a full-fledged Muslim town.

The Arab geographer Yaqut (d. 1229) made the mosque and the *suq* as the distinctive qualifier for a place to be called a town (Grunebaum, 1959, p. 141). Ibn Battuta (d. 1368/9), in his travel to China commented on a town inhibited by Muslims

where 'their *bazaars* are arranged just as they are in Islamic countries; they have mosques in it and *muezzins*' (Gibb, 1983, p. 293). Hourani (1995) included the mosque, the public square and the residences of religious and commercial classes as the constituents of the urban complex which is one of the prominent characters of a classical Islamic city.

3.10 Conclusion

The architectural qualities found in the Prophet's Mosque's model are the results of definition of functional spaces existing in the mosque which required different physical treatments due to the nature in which the spaces were utilised. In addition to climatic requirements and availability of materials and technology, the hypostyle model came to be recognised as the mother of mosque architecture in Islam. The recurrence of the Prophet's Mosque's model in the principal mosques of various regions in the Islamic world such as Qairawan, Cordoba and Samarra was for a very fundamental reason besides emulation of the Prophet's deed; it is the most adaptive model which responds to the liturgical and socio-religious requirements demanded of a public space such as the mosque.

The evidences presented from the history of the Prophet Muhammad (S) demonstrated the initial formation of a mosque in Islam based on the evolution of the prayer from being a personal affair to becoming a communal activity. The Prophet's Mosque served as a model in which various liturgical and socio-religious functions were accommodated within very simple and pragmatic spatial arrangements of the mosque. The Prophet's Mosque is a prototype for *masjid al-jami'* i.e. a mosque where communal Friday prayers are held besides the daily prayers; and is an exemplary model of *masjid al-sulthaniyyah* i.e. a mosque controlled by the state authority.

Based on this scenario, the selected mosques in Island Southeast Asia will be studied according to the criteria set by the Prophet's Mosque. Similarities and variations will be discussed in order to understand the rationale of mosque designs outside of the Arabia.

4 CHAPTER 4: CATALOGUE OF MOSQUES SELECTED FOR ANALYSIS

4.1 Selected Mosques According to Chronological Order

PERIOD	NOS	REGION	LOCATION	MOSQUES
15-16TH CENTURY	1	East Java	Surabaya	Sunan Ampel
	2	East Java	Lamongan	Sendang Duwur
	3	East Java	Giri	Sunan Giri
	4	Central Java	Jepara	Mantingan
	5	Central Java	Kudus	Kudus (Al-Aqsa)
	6	Central Java	Demak	Demak
	7	West Java	Banten	Agung Banten
	8	West Java	Cirebon	Cirebon Kasepuhan
	9	West Java	Panjunan	Panjunan
	10	Nusa Tenggara	West Lombok	Bayan Beleq
17-18TH CENTURY	11	Batavia/Jakarta	North Jakarta	Kebon Jeruk
	12	Batavia/Jakarta	West Jakarta	An-Nawier
	13	Batavia/Jakarta	West Jakarta	Al-Mansur
	14	Batavia/Jakarta	West Jakarta	Kg Baru
	15	Nusa Tenggara	Alor, East Nusa Tenggara	At-Taqwa
	16	Sulawesi	Luwu, South Sulawesi	Palopo
	17	South Thailand	Patani	Teluk Manok
	18	Malay Peninsula	Melaka	Tengkera
	19	Malay Peninsula	Melaka	Kg Hulu
	20	Malay Peninsula	Melaka	Kg Laut
	21	Malay Peninsula	Melaka	Kg Keling
	22	North Maluku	North Ternate	Masjid Sultan Ternate
19-20TH CENTURY	23	Batavia/Jakarta	West Jakarta	Langgar Tinggi
	24	Batavia/Jakarta	Cikini	Al-Makmur Cikini
	25	Central Java	Surakarta	Agung Surakarta
	26	South Kalimantan	Banua Lawas	Pusaka
	27	Sumatera	Tanjung Pura	Azizi
	28	Sumatera	Jambi	Pondok Tinggi
	29	Riau	Pulau Penyengat	Pulau Penyengat
	30	Irian Jaya	Fak Fak	Patinburak
	31	Malay Peninsula	Pulau Pinang	Lebuh Acheh
	32	Malay Peninsula	Johor Bahru	Sultan Abu Bakar
	33	Malay Peninsula	Ipoh, Perak	India Perak
	34	Malay Peninsula	Alor Setar, Kedah	Zahir
	35	Malay Peninsula	Kuala Kangsar, Perak	Ubudiah
	36	Malay Peninsula	Ipoh, Perak	Paloh
	37	Malay Peninsula	Pulau Pinang	Kapitan Keling
	38	Malay Peninsula	Teluk Intan, Perak	Batak Rabit
	39	Malay Peninsula	Langgar, Kedah	Surau Tok Janggut
	40	Malay Peninsula	Ipoh, Perak	Panglima Kinta
	41	Malay Peninsula	Kota Bharu, Kelantan	Langgar

Table 4-1 Selected mosques according to chronological order

4.2 15-16th CENTURY MOSQUES

4.2.1 MASJID SUNAN AMPEL

Location:	Ampel Denta, Surabaya, Indonesia[42]
Date:	1421-1450[43]
Condition:	Extensively renovated, although original form can still be detected
Original Patron:	Raden Rahmat[44]
Material:	Wooden frame with cement-rendered bricks
Significance:	Historical: Mosque attributed to one of the seven saints *(walisongo);* important *ziyarah* (tomb visit) site.
Stylistic Influence:	Vernacular (original), Colonial-European (extensions)

Table 4-2 Masjid Sunan Ampel background data

Figure 4-1 Masjid Sunan Ampel, within the district of Simokerto northern of Surabaya city in East Java

[42] Information taken from (Irwan Suhanda (ed), 2006; Wiryoprawiro, 1986)

[43] Signboard erected at the mosque complex stated the mosque was built in 1421. According to Wiryoprawiro the complex was built around 1450s (Wiryoprawiro: 1986).

[44] Also known as Sunan Ampel; according to *Catatan Tahunan Melayu: Teks Parlindungan* his real name was Bong Swi Hoo, a grandson of Bong Tak Keng who was given the authority to rule Champa – which was an Islamic kingdom at that time. His mother was a princess of Champa whose sister was married to one of the rulers in Majapahit kingdom (Ashadi, 2006). The name Sunan Ampel was attributed to him due to his contribution to the Islamic activities in the Ampel area (Irwan Suhanda (ed), 2006).

Figure 4-2 Masjid Ampel gated wall with paduraksa gateway (closed gateway)

Figure 4-3 Bazaars selling prayer and ritual related goods to the mosque and tomb visitors

Masjid Ampel is located in the village of Ampel, within the district of Simokerto northern of Surabaya city in East Java (Figure 4-1). The mosque was historically placed at the fringe of Brantas River which was once an important water network of the Majapahit rule. The close proximity of the mosque to the gateway of Majapahit ruling centre facilitated in the dissemination of Islamic teaching to the areas surrounding it (Wiryoprawiro, 1986). The mosque's site is defined by a gated wall with paduraksa gateway (closed gateway) marking the entrance to the sacred area (Figure 4-2). Alongside the paths leading to the main entrances are bazaars selling prayer and ritual related goods to the mosque and tomb visitors (Figure 4-3).

The mosque complex is made up of the old mosque, the new extension – adjoined to the old building, a meeting hall on the southeast of the mosque which also houses the women prayer area, two ablution buildings on the southeast and southwest of the mosque for women and men respectively; the tomb complex of Sunan Ampel to the western part of the mosque and a cemetery area on the northern side.

The old mosque originally had an almost square plan with the dimension of 46.8 meter by 44.2 meter (Figure 4-4). The floor is covered with marble and this main building was originally built using timber construction with 4 central main pillars *(soko*

guru) and a total of 36 pillars supporting a two-tiered roof in the form of a *tajug* (pyramid). Currently the walls of the mosque are all cement rendered bricks with white paint finishes. The extended part of the mosques incorporated a large prayer hall surrounded by *serambi* (veranda) made by the projection of the lowest roof level (Figure 4-5 and 4-6). The structures of the serambi are supported by large round Doric columns (Figure 4-7).

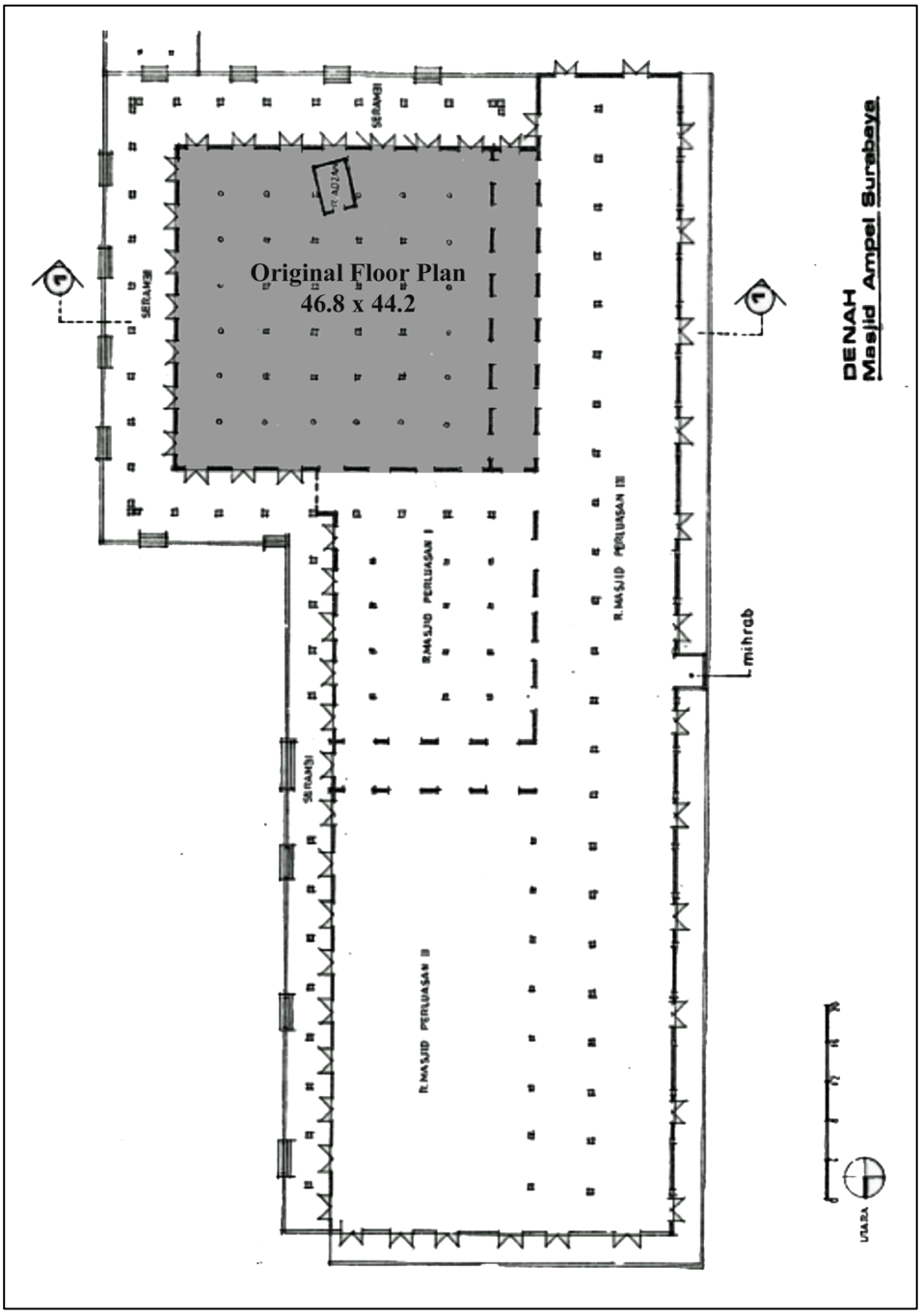


Figure 4-4 Masjid Sunan Ampel original square plan (shaded in grey)

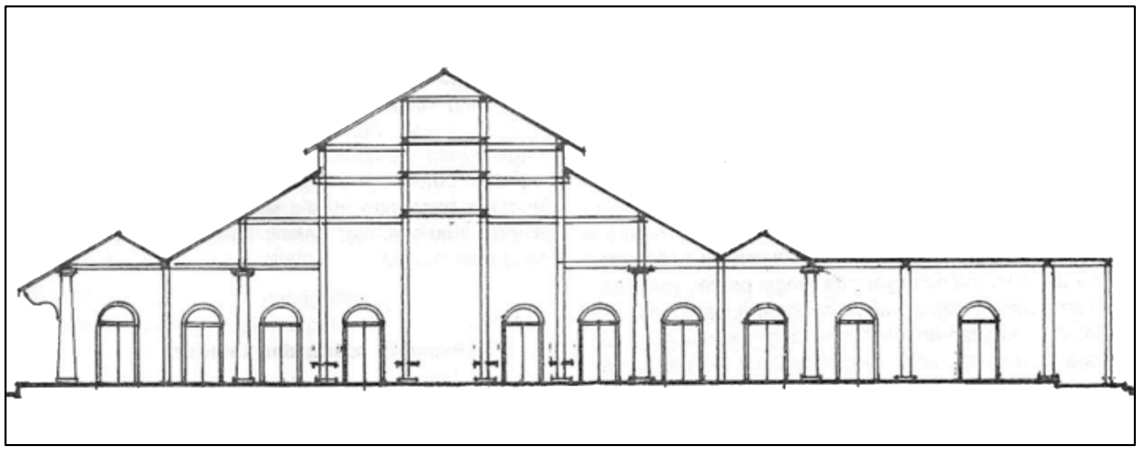


Figure 4-5 Masjid Sunan Ampel longitudinal cross-section drawing

Figure 4-6 Masjid Sunan Ampel external view

Figure 4-7 The structures of the serambi are supported by large round Doric columns

A round minaret with a square base located at the main hall penetrated the roof line soaring approximately 30 meter height is said to be an original feature of the mosque (Figure 4-8), although by looking at the floor plan, the minaret seemed to be located in the extended part of the main hall which was previously the veranda. The circular form and construction method also indicated that it was added later; although there are no clear records on when it was actually built. The minaret is built using cement rendered bricks construction forming a round cylindrical body with an octagonal metal roofing top.

Figure 4-8 Masjid Sunan Ampel original minaret located at the main hall penetrating the roof line

Sunan Ampel tomb complex is located to the western side of the mosque – near the extended qibla wall. The complex houses the graves of Sunan Ampel, his wife and five other family members. The surrounding fence-works was made from aluminum steel at the height of 2.5 meters. The ground around the tomb of Sunan Ampel is covered with white sands; his grave marker is in the shape of the leaves of lotus. The tomb is not covered with any roofs or cungkup as found in many tombs of the walis in Java. According to oral tradition, it was Sunan Ampel's wish that his graves not to be covered with any structure (Irwan Suhanda (ed), 2006) (Figure 4-9).

Source: *(http://jelajahnuansaindonesia.blogspot.com/2012/07/ziarah-walisongo-di-makam-sunan-ampel.html*)

Figure 4-9 Fig. The tomb of Sunan Ampel, not covered by a *cungkup*

4.2.2 MASJID SENDANG DUWUR

Location:	Village of Sendang Duwur, Paciran, Lamongan, Indonesia[45]
Date:	1561[46]
Condition:	Extensively refurbished, the main pillars are said to be original, all other materials in the main prayer hall have been replaced. The tomb structures and materials however are still in very good condition.
Original Patron:	Sunan Sendang[47]
Material:	Wooden frame with cement rendered bricks (mosque)
Significance:	Historical: the patron and mosque's relationship with Mantingan Mosque; Architectural: the only mosque with display of magnificent stone artwork as 3 dimensional structures in its tomb complex
Stylistic Influence:	Vernacular

Table 4-3 Masjid Sendang Duwur background data

The mosque complex is located on an elevated site within the villages of Sendang Duwur and Sendang Agung (also known as Sendang Lebak) (Figure 4-10). Sendang is Javanese for small pond, whereas Duwur means high (Sendang Duwur: small pond on a high ground); while Lebak means valley. The Sendang Duwur village is situated in a rock hill area which is quite remote from the flat coastal region; and can

[45] Main source of information (Tjandrasasmita, 1984)

[46] The mosque is believed to have been built in late 16th century. A chronogram found on a wooden panel written in Javanese characters in an archaic shape together with an inscription below it in Arabic language was translated by Pijper as follows: "It may be known that this mosque has been built twice, the first time in 1483 (Javanese calendar) which is the same as 971 Hijrah;*46* and the second time in 1851 (Javanese calendar) which is 1339 Hijrah, which makes it 368 years between the two constructions. In the second construction, stones and a part from the wood of the first building have been used". Another inscription found on a decorative wooden panel at the tomb of Sunan Sendang is written in Javanese characters of an ancient form. According to Stutterheim who analysed the panel, the date inscribed was 1507 Shaka or 1585 A.D. This date could be the date of the foundation of the tomb or the year Sunan Sendang died. The 24 years difference (between 1561 A.D and 1585 A.D) is reasonable; thereby establishing the approximate date of construction for the mosque to be around that period (Tjandrasasmita, 1984).Tjandrasasmita in his thesis on Sendang Duwur found a copy of an old manuscript that narrated the history of the mosque. According to this manuscript, Sunan Sendang was said to have "flown" the mosque from Mantingan and had it landed on the Tunon Hill (Sendang Duwur). The date quoted from the manuscript coincides with the inscription found on the panel "gunaning salira tirta hayu" which correlates to 1483 Shaka or 1561 A.D.

[47] It is said to have been founded by Raden Nur Rakhmad, the son of Raden Abdul Qohar – an *'alim* from Lamongan; and a grandson to Syeikh Abu Jazid Al Baghdadi a renown ulema from Egypt. His contributions to Islamic teachings in Sendang Duwur gave him the title Sunan Sendang (Wiryoprawiro, 1986)

be reached by car from the arterial road of Sedayu-Tuban through a small road of approximately 5 km. From Sendang Duwur village, the mosque is accessible by foot, through a series of levels ascending approximately 500 meter. The cemetery is a dominant feature in Sendang Duwur mosque. From the site plan, it is evident that the mosque only occupies approximately a tenth of the whole compound (Figure 4-11).

Figure 4-10 Masjid Sendang Duwur and Sendang Agung (also known as Sendang Lebak)

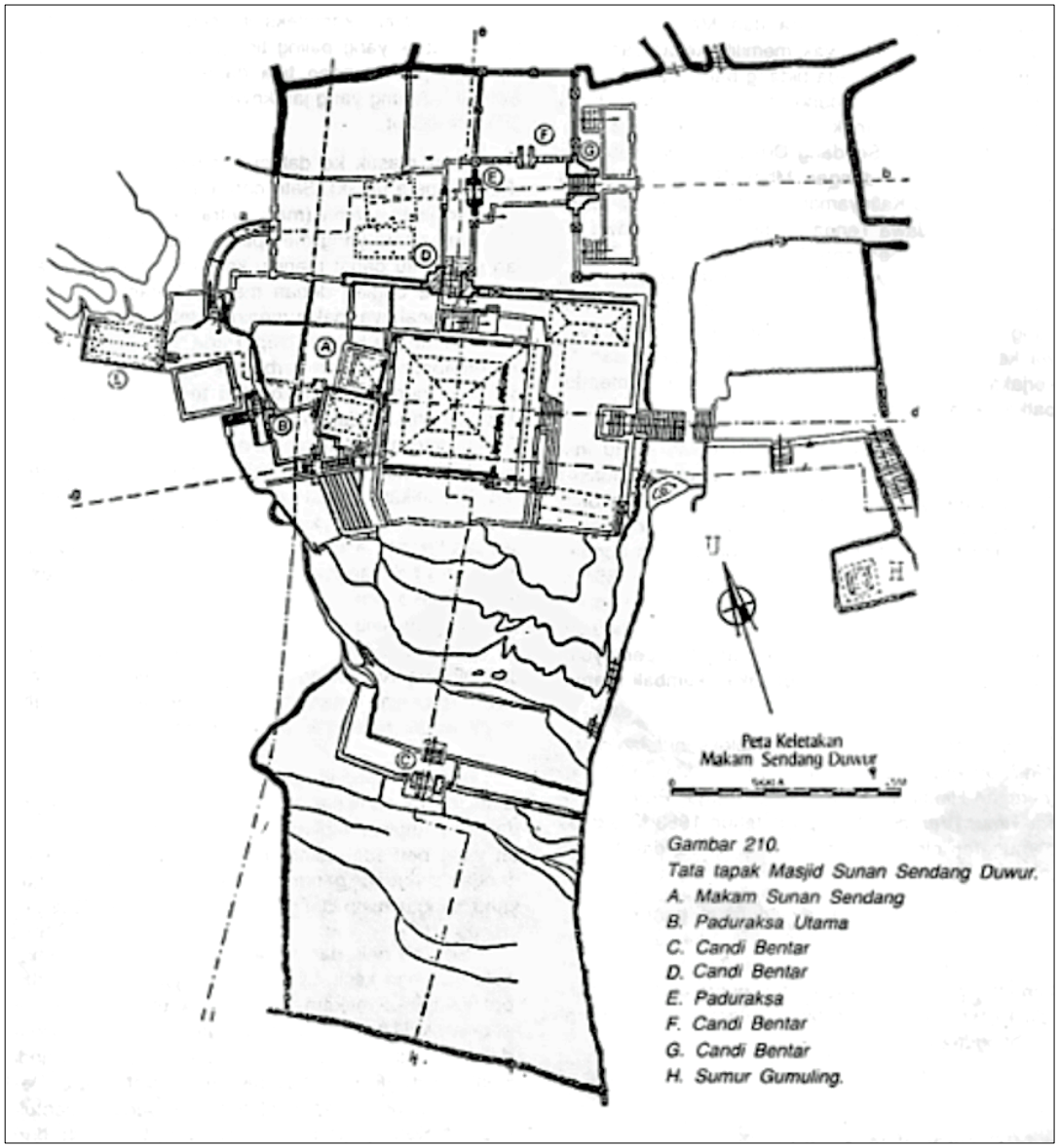


Figure 4-11 Masjid Sendang Duwur and Sendang Agung site plan

The site of the mosque is marked by walled gateway made from mountain rocks. The wall structures are decorated with stupa and lotus columns projected from top of the boundary walls. *Paduraksa* or *Kori Agung* (closed gates) (Figure 4-12) and *Candi Bentar* (split gates) (Figure 4-13) in a variety of design incorporating wings of *garuda* (Javanese mythical bird) (Figure 4-14), lotus and stupa exhibit fine stone carving tradition, possibly the last material evidence of the pre-Islamic building tradition for temples (Figure 4-15; 4-16 (a) and 4-16 (b)).

Figure 4-12 *Paduraksa* or *Kori Agung* (closed gates)

Figure 4-13 *Candi Bentar* (split gates)

Figure 4-14 Wings of *garuda* (Javanese mythical bird) gateway

Figure 4-15 *Stupa* or *gunungan*: stone carving of pre-Islamic building tradition

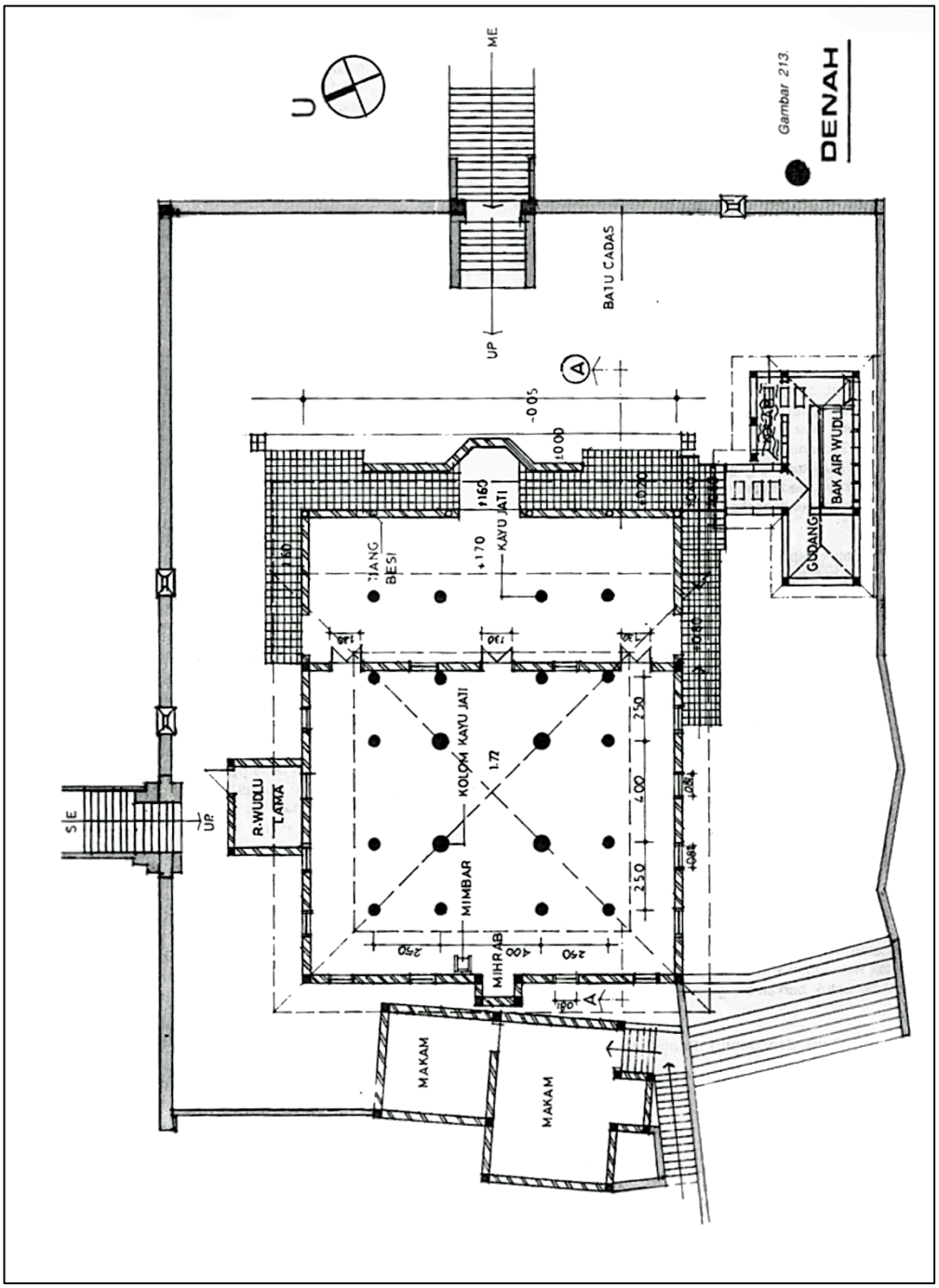
(A) (B)

CONTINUITY OF PRE-ISLAMIC BUILDING TRADITION

Figure 4-16 (a) Open lotus motif. (b) The face of *Kala* with *Garuda* wings

The mosque complex is made up of:

- The main building which consists the prayer hall. The building materials have all been replaced with the exception of the main central pillars (soko guru). However it still retain the original floor plan and the form of the building (Figure 4-17)
- The eastern entrance compound which consists of a well (Sumur Giling), and a flight of staircase directly connected to the main entrance of the mosque (Figure 4-18)
- The northern compound that have different sections of old cemeteries (Figure 4-19) with two roofed structure storing wooden panels taken off from the old mosque (Figure 4-20)
- The western compound: where the tomb of Sunan Sendang is located under *cungkups* (pyramidal and hip roofs) within a courtyard which is located on a lower level to the level of the mosque (Figure 4-21). This courtyard is locked from visitors who have no intention to pay homage (*ziyarah*) to the tomb ((Tjandrasasmita, 1984).
- The southern compound: a steep site containing cemetery and a gated entrance to the south giving access to the mosque for villages from Sendang Lebak (Figure 4-22).



THE BUILDING MATERIALS HAVE ALL BEEN REPLACED WITH THE EXCEPTION OF THE MAIN CENTRAL PILLARS (*SOKO GURU*). HOWEVER IT STILL RETAIN THE ORIGINAL FLOOR PLAN AND THE FORM OF THE BUILDING

Figure 4-17 The main building consists of the prayer hall.

Figure 4-18 The eastern entrance compound which consists of a well (*Sumur Giling*) and a flight of staircase directly connected to the main entrance of the mosque

Figure 4-19 The northern compound that have different sections of old cemeteries

PHOTO CREDIT: ALI AKBAR

Figure 4-20 Roofed structure storing wooden panels taken off from the old mosque

Figure 4-21 The tomb of Sunan Sendang located under *cungkups*

Figure 4-22 The southern compound of Masjid Sendang Duwur.
A steep site containing cemetery and a gated entrance to the south giving access to the mosque for villages from Sendang Lebak

4.2.3 MASJID SUNAN GIRI, EAST JAVA

Location:	Dusun Giri Gajah, Kebomas, East Java, Indonesia[48]
Date:	15th century[49]
Condition:	Consists of two parts: main building which has 3 tiered roofs and *masjid wedok* (women's prayer hall) which has 2 tiered roofs. Maintained old forms although wall materials and roof coverings have been changed.
Original Patron:	Descendants of Sunan Giri
Material:	Wooden frame with cement rendered bricks
Significance:	Historical: one of the mosques credited to the efforts of the *wali songo* (nine saints)
Stylistic Influence:	Vernacular

Table 4-4 Masjid Sunan Giri background data

The original mosque of Sunan Giri was built by Muhammad Ainul Yaqin, also known as Sunan Giri, on the hilly site of Kedaton in 1399 Saka in the form of a *langgar* (i.e. small mosque) (Figure 4-23). Upon his death, Sunan Giri was laid to rest on the Giri Hill (Bukit Giri) and his son Sunan Dalem built the tomb complex on this site in 1428 Saka / 1506 A.D. In 1544 A.D. the widow of Sunan Giri's grandson arranged for the mosque to be moved from Kedaton to Giri Hill. Using many of the original mosque's materials, the new mosque was bigger and expanded to include *Masjid Wedok* (Women's Mosque) (Figure 4-24).

[48] Main source of information (Moehamad Habib, 2001; Wiryoprawiro, 1986)

[49] The original mosque of Giri is said to have been built on the Kedaton Hill in the 15th century, while the Masjid Sunan Giri that we know today, was built by the grandson of Sunan Giri in the 19th century on a site which has been a tomb complex built by the son of Sunan Giri for people visiting his father's tomb. This mosque however uses building elements, such as pillars and beams, which were the original structural frames of the old mosque.

Figure 4-23 A structure on the hilly site of Kedaton, in the form of a *langgar* (i.e. small mosque)

Figure 4-24 *Masjid Wedok* (Women's Mosque) with lower roof heights than the main building

Masjid Sunan Giri currently consists of three main components: the main building, which is a three tiered roof structure which has been enlarged although still employing the structural and decorative features of the old *langgar*; Masjid Wedok, a two-tiered structure adjoining the main hall and connected by a door; and the necropolis located to the west of the mosque, that houses *cungkups* of Sunan Giri and immediate family members (Figure 4-25). The main building is surrounded by moats, as evident in the floor plan (Figure 4-26). As with many other traditional mosques, this mosque does not have a minaret, and the *beduk* (drum) used to announce the time of prayer is located in the upper level of the structure built to the north of the entrance courtyard.

Figure 4-25 The necropolis located to the west of the mosque

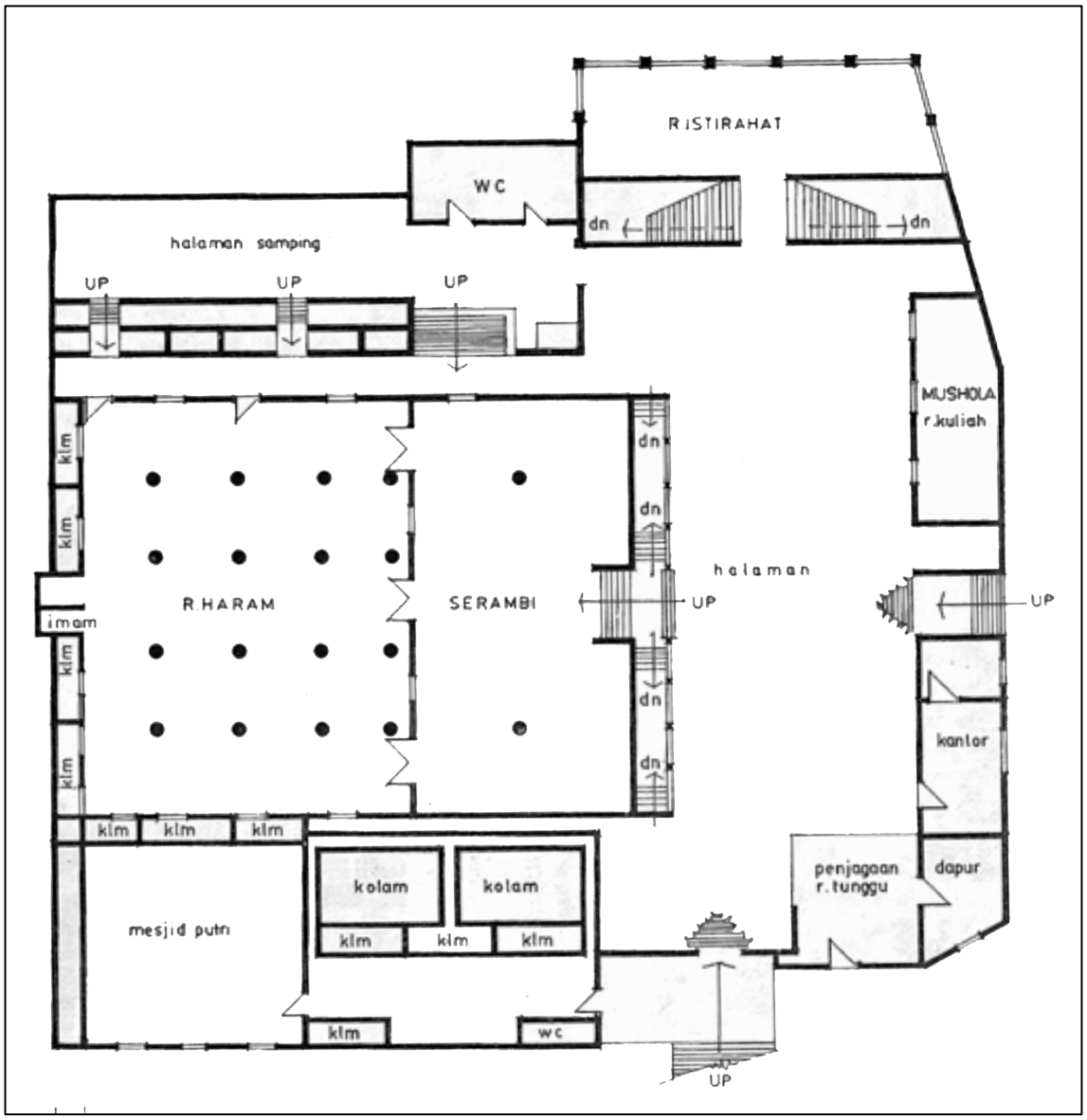


Figure 4-26 Floor plan that shows the main building is surrounded by moats (indicated by *klm*)

Parking spaces are provided for vehicles at the foothill and the mosque is accessible via two entrances with their stairways; one leads directly to the tomb complex before reaching the mosque; while the other stairways lead the visitor directly to the mosque. In order to reach this mosque, one will have to go by foot through these stairways. Entrance to the main levels of the necropolis is marked by gateways in the form of closed gates (*paduraksa)* and split gates (*candi bentar)* (Figure 4-27).

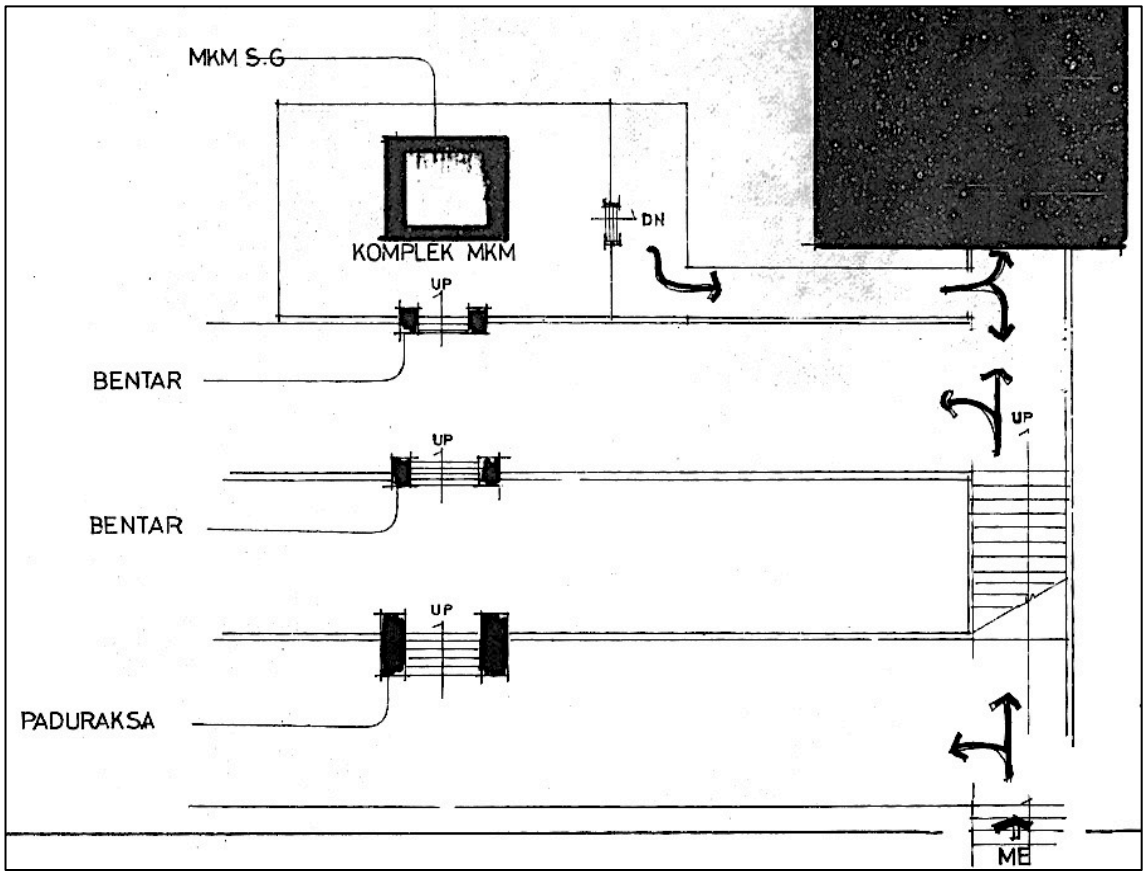


Figure 4-27 Floor plan shows gateways in the form of *paduraksa* and *candi bentar*

The sides of both entrances with the stairs towards the mosque are filled with bazaar-like kiosks that sell small items and souvenirs. By taking the stairs that lead to the tomb complex, one will be passing through six burial places which house approximately 300 graves (Figure 4-28). The tomb of Sunan Giri is placed under a *cungkup* to the left of the mosque i.e. to the west of the main prayer hall behind the *mihrab* (Figure 4-29).

Figure 4-28 Necropolis at Mount Giri which has approximately 300 graves

Figure 4-29 The tomb of Sunan Giri is placed under a *cungkup*

The main entrance to the main hall compound is marked by a *paduraksa* gateway (Figure 4-30). The courtyard in front of the mosque is currently paved with tiles. The mosque main entrance has been extended to incorporate *serambi* (veranda) with pointed arch forms of polycarbonate roofing (Figure 4-31). In order to enter the main hall, one's feet will be cleansed by passing through the moat surrounding the main prayer hall (Figure 4-32).

Figure 4-30 The main entrance to the main hall compound is marked by a *paduraksa* gateway

Figure 4-31 The mosque main entrance incorporating *serambi* (veranda) with pointed arch forms

Figure 4-32 The moat surrounding the main prayer hall

4.2.4 MASJID MANTINGAN, CENTRAL JAVA

Location:	Village of Mantingan, Jepara, Central Java, Indonesia[50]
Date:	16th century[51]
Condition:	Maintained old forms although wall materials and roof coverings have been changed.
Original Patron:	Ratu (Queen) Kalinyamat, wife of Sultan Hadlirin
Material:	Wooden frame with cement rendered bricks
Significance:	Historical: Built by a very powerful lady patron, Ratu Kalinyamat. Architectural: The mosque's unique coral-carved panels arranged in medallion pattern.
Stylistic Influence:	Vernacular

Table 4-5 Masjid Mantingan background data

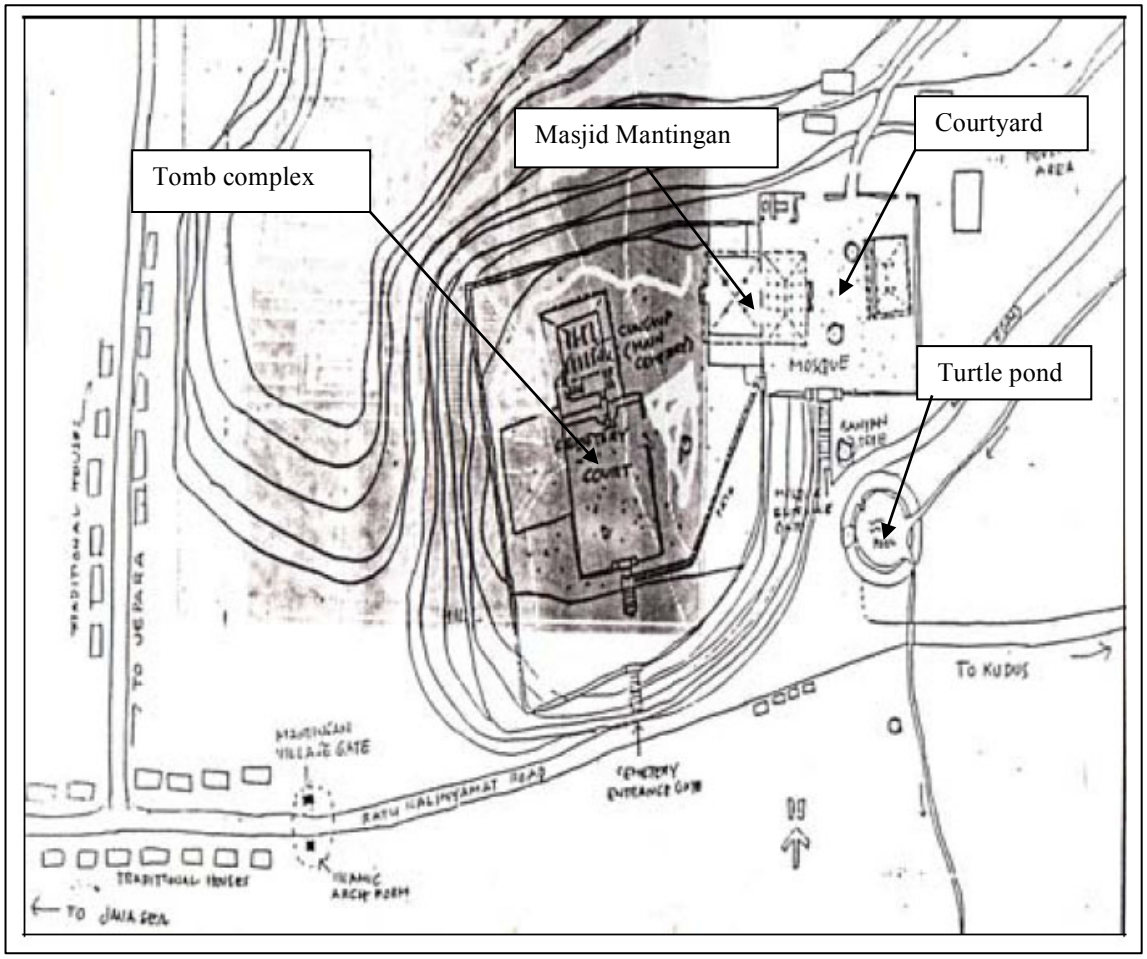
Figure 4-33 Masjid Mantingan external view

Masjid Mantingan, which is also known as Masjid Astana Mantingan, is located in Mantingan village within the district of Dati II Jepara; which is 6 kilometer to the south of Jepara town. The mosque is accessible from the town through a series of

[50] Main source of information (Ashadi, 2006; Graaf & Pigeaud, 1985; Handinoto & Hartono, 2007)

[51] Based on the inscription found above the *mihrab*, written in Javanese *"rupa brahmana warna sari"*, the mosque was founded on 1481 Saka equivalent to 1559 A.D. The *serambi* is a recent addition, built in 1950s (Ashadi)

villages and agricultural lands. The mosque complex is located on a small hill – about 5 to 10 meter height from road level. It is surrounded by plantation fields and located close to the woodcraft industry of Jepara. The villagers' dwellings are found outside the perimeter of the agricultural lands and woodcraft industry.



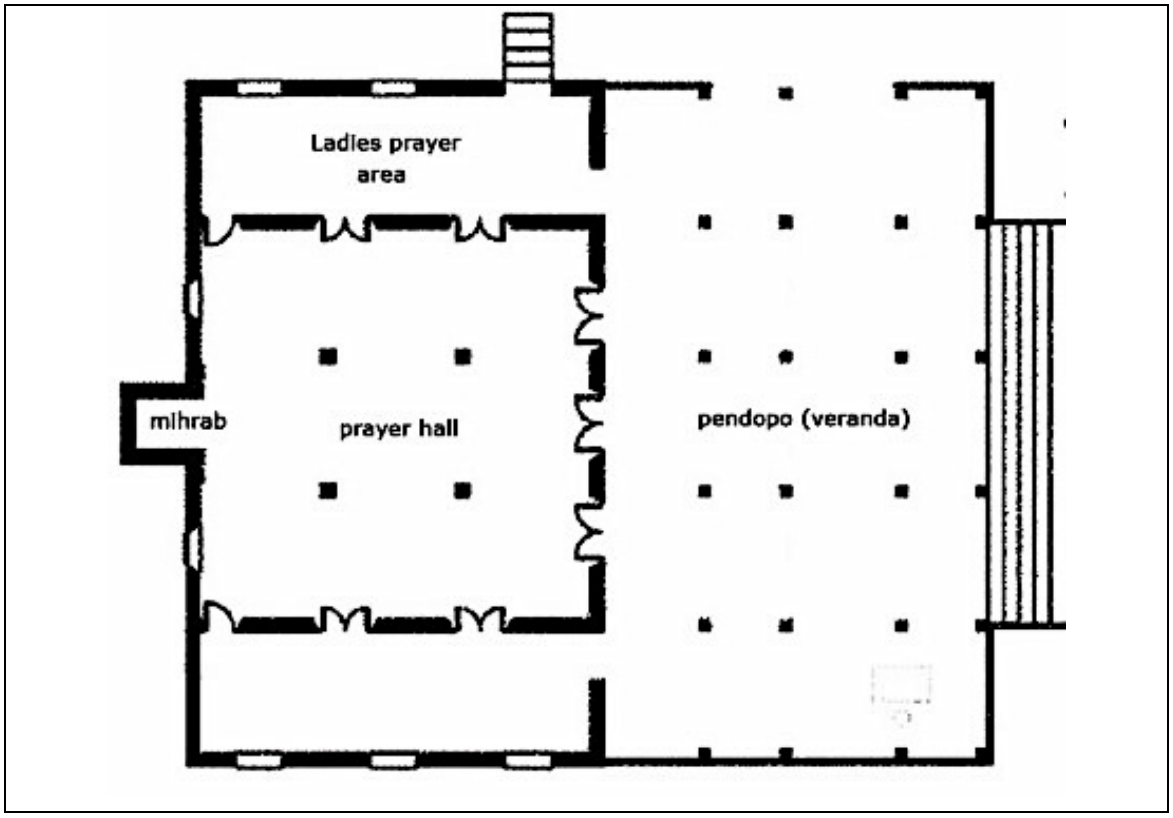
SOURCE: (HANDINOTO & HARTONO, 2007)

Figure 4-34 Masjid Mantingan site plan

Pangeran Hadlirin made Kalinyamat (18 km south of Jepara) as the ruling centre and according to folk story, during the stressful times of ruling Jepara, from time to time he loved to be in seclusion at Mantingan. To enable her to be with her husband, Ratu Kalinyamat built a house *(pasanggrahan)* in Mantingan. In about 1549, Hadlirin was killed by the ruler of Jipang Panolan, Haryo Penangsang (or Arya Panangsang) and his body was buried at Mantingan. The Mantingan Mosque was built by Ratu Kalinyamat in about 1559; at the same site where the house was; in commemoration of her husband's death. The date of the mosque's foundation is based on the inscription found

on the *mihrab* of the mosque, written in Javanese script referring to the year of 1481 (*Saka 1481*) which correlates to 1559 C.E. (Ashadi, 2006, pp. 91-2).

The mosque is a three tiered pyramidal roof structure with attached *pendopo* style *serambi* (built in 1950s) (Figure 4-35). At present a 2-tiered *pendopo* structure is also constructed to the north of the main prayer hall, adjoining the main building with the ablution area (Figure 4-36). A large courtyard to the front of the mosque, paved with terracotta tiles with a *waringin* tree planted, serves as the entry point for the mosque area (figure 4-37). The entrance wall of the mosque is decorated with carved coral panels, arranged in medallion fashion (figure 4-38). A huge *beduk* and *kentong* is also found hung in the *serambi* area. As with many traditional mosques, this mosque is without a minaret (figure 4-39).



EDITED FROM (BAMBANG, 2000B)

Figure 4-35 Masjid Mantingan floor plan indicating the *pendopo* (veranda)

Figure 4-36 Two-tiered *pendopo* structure constructed to the north of the main prayer hall

Figure 4-37 Entry point for the mosque area

Figure 4-38 The entrance wall of the mosque decorated with carved coral panels

Figure 4-39 A big drum (*beduk)* and hanging log *(kentong)* were used to summon people for prayers

The tomb building of Sultan Hadlirin and Ratu Kalinyamat is located to the west of the mosque (Figure 4-40). The tomb complex area is defined by fences built in mountain rocks (Figure 4.41), with *paduraksa* (closed) and *candi bentar* (split) gateways marking the entry to the sacred sites (Figure 4-42 and 4-43).

Figure 4-40 The tomb complex area is defined by fences built in mountain rocks

Figure 4-41 Masjid Mantingan brick and stone fences

Figure 4-42 *Candi bentar* (split) gateways marking the entry to the sacred sites

4.2.5 MASJID MENARA KUDUS, CENTRAL JAVA

Location:	Kudus, Central Java, Indonesia[52]
Date:	15th - 16th century[53]
Condition:	Maintained old forms although wall materials and roof coverings have been changed.
Original Patron:	Sunan Kudus, Ja'afar al-Sadiq
Material:	Mountain rocks in gateway structures, ablution pond; wooden structural members with cement rendered bricks in walls.
Significance:	Historical: An important learning centre; the only traditional mosque in Java that uses Arabic name (Al-Quds). Architectural: pre-Islamic building type.
Stylistic Influence:	Vernacular, Hindu temples.

Table 4-6 Masjid Menara Kudus background data

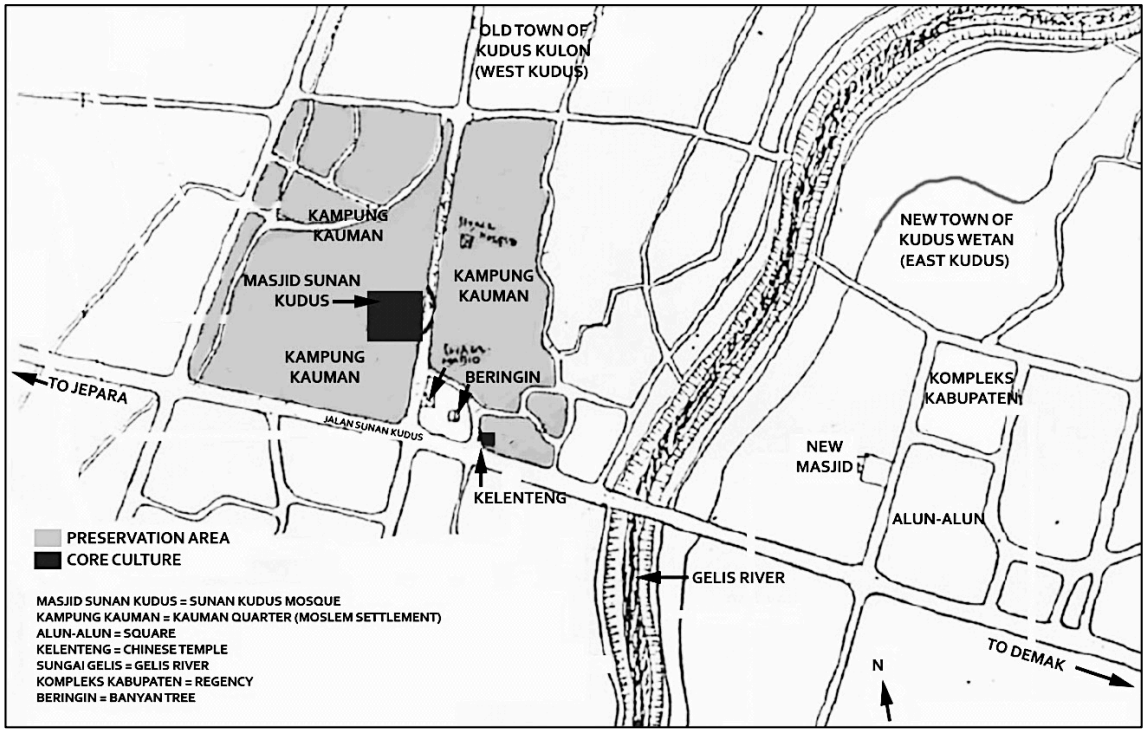
PHOTO CREDIT: ALI AKBAR

Figure 4-43 Masjid Menara Kudus exterior view

[52] Main source of information (Ashadi, 2006; Graaf & Pigeaud, 1985)

[53] Based on the inscription found above the *mihrab*, written in Javanese *"rupa brahmana warna sari"*, the mosque was founded on 1481 Saka equivalent to 1559 A.D. The *serambi* is a recent addition, built in 1950s (Ashadi, 2006)

Masjid Menara Kudus is located in a town called Kudus, approximately 26 kilometres northeast of Demak and 38 km from Jepara, on the northern coastal region of Central Java. It is located to the west of Sungai (River) Gelis that divides the town of Kudus into two parts: the west where the mosque is located is known as Kudus Kulon (Old Kudus); while the east of the river is known as Kudus Wetan (Modern Kudus). The mosque is surrounded by village settlement of *Kauman* which traditionally was recognised as a center for Islamic learning and propagation activities and residing place for many *ulemas* (Irwan Suhanda (ed), 2006) (Figure 4-44).

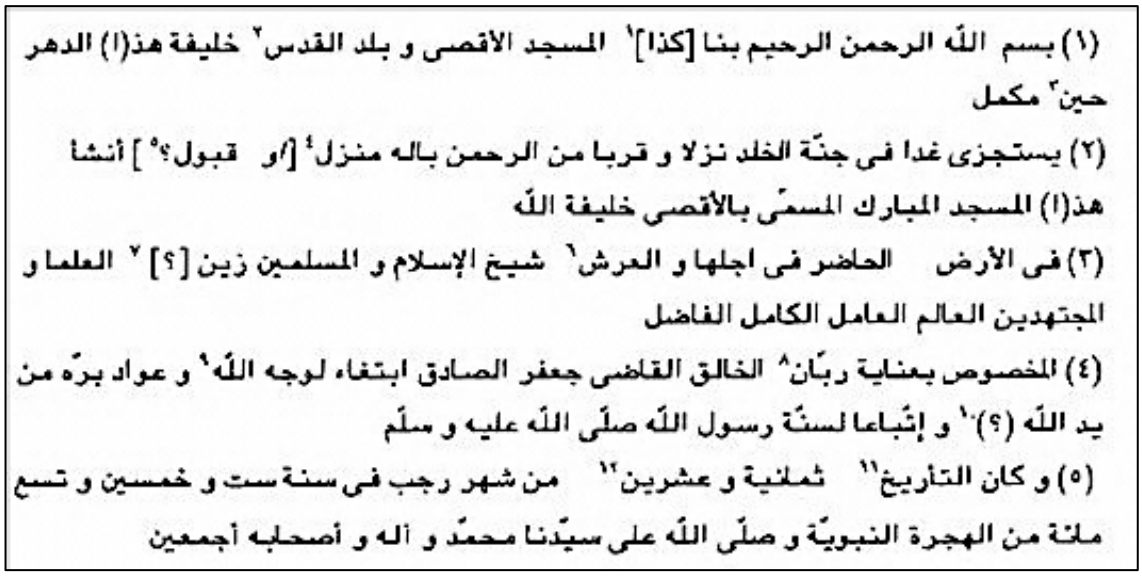


EDITED FROM (HANDINOTO & HARTONO, 2007)

Figure 4-44 Masjid Menara Kudus site plan

The word Kudus originated from the Arabic word *al-Quds* – the Arabic name for Jerusalem in Palestine. The mosque is the only mosque in the Malay World, known to have adopted an Arabic name. According to Klaus and Guillot (2008), the inscription in Arabic, written in *Thuluth* calligraphic style found located above the *mihrab* of the mosque, is rare in nature, both in its linguistic expression as well as the precise nature in which the name of Al-Aqsa mosque in Jerusalem is attributed to this mosque in Java.

The discussions regarding the significance of the stella only appeared in recent years[54], despite the fact that the inscription was found in the excavation works in 1996 and has only been recently relocated at the *mimbar* (Kalus & Gilliot, 2008, p. 109). Even in the book on Islamic archaeology of Indonesia, "*Menemukan Peradaban*", the renowned Indonesian Islamic archaeologist, Hasan Muarif Ambary only mentioned two mosques which date of construction was recovered from inscriptions; Masjid Mantingan and Masjid Sendang Duwur. Nothing was mentioned with regards to this important inscription discovered in Masjid Menara Kudus (Ambary, 1998, p. 17) (Figure 4.45).


(١) بسم الله الرحمن الرحيم بنا [كذا][١] المسجد الأقصى و بلد القدس[٢] خليفة هذ(ا) الدهر
حين[٣] مكمل
(٢) يستجزى غدا فى جنّة الخلد نزلا و قربا من الرحمن باله منزل[٤] [أو قبول؟][٥] أنشا
هذ(ا) المسجد المبارك المسمّى بالأقصى خليفة الله
(٣) فى الأرض الحاضر فى اجلها و العرش[٦] شيخ الإسلام و المسلمين زين [؟][٧] العلما و
المجتهدين العالم العامل الكامل الفاضل
(٤) المخصوص بعناية ربّان[٨] الخالق القاضى جعفر الصادق ابتغاء لوجه الله[٩] و عواد برّه من
يد الله (؟)[١٠] و إتّباعا لسنّة رسول الله صلّى الله عليه و سلّم
(٥) و كان التاريخ[١١] ثمانية و عشرين[١٢] من شهر رجب فى سنة ست و خمسين و تسع
مائة من الهجرة النبويّة و صلّى الله على سيّدنا محمّد و آله و أصحابه أجمعين

SOURCE: (KALUS & GUILLOT, 2008, P. 101)

Figure 4-45 Inscription discovered in Masjid Menara Kudus.

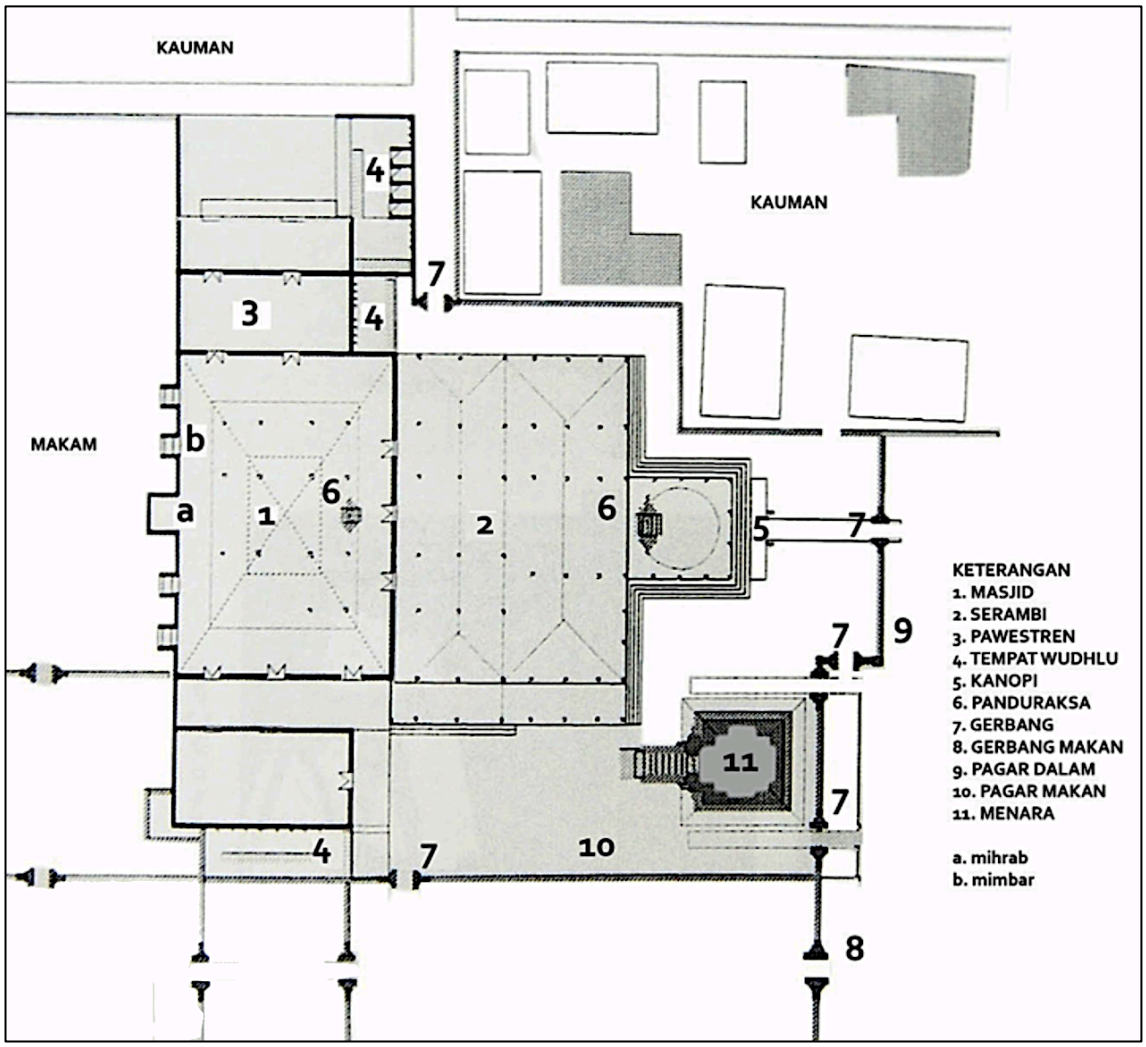
Although some of the scripts were illegible, important details were able to be extracted from the inscription as it reads (translated):

> In the name of Allah most compassionate most merciful. The al-Aqsa mosque and the town of al-Quds were built by the Caliph of this life until completed.
>
> (He) will be remunerated tomorrow in "the Garden of Immortality" in category and by the proximity to the most Compassionate. (?) … Has founded this blessed mosque called al-Aqsa the caliph of Allah

[54] When the researcher conducted the trip to Kudus in 2005, she was uninformed of the presence of the inscription. Even the person who guided the tour to the mosque at that time may have thought of it as insignificant as there was no mention of the inscription.

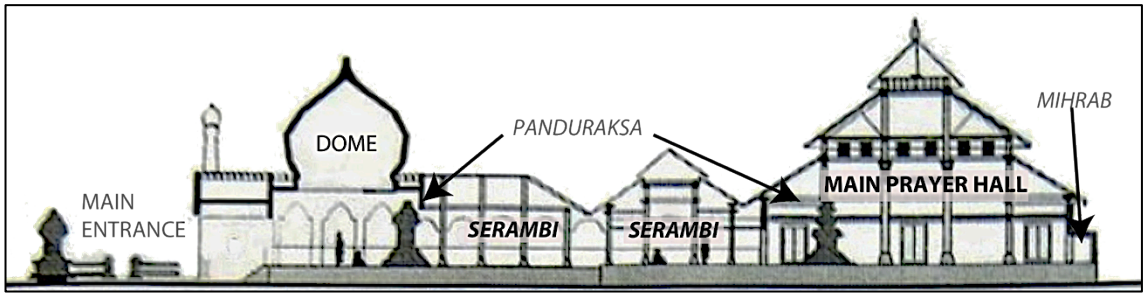
> on Earth to this confined land and on the Throne, Shaykh of Islam and the Muslims, Ornament [?] of the knowledgeable and those devoted to the study of the divine law, the knowledgeable, the active, the perfect, the virtuous,
>
> the favoured with care by the divine Creator, judge Ja'far al-Sadiq, for the sake of God and for desiring the reward from God and in obedience of the sunna of the Envoy of God - may God bless and greet him.
>
> The date was the 28th of the month of Rajab of the year 956 of the Hijra of the Prophet - may God bless our master Muhammad and His family and all his companions.

Based on this inscription, the mosque was said to be built by Ja'far as-Śadiq; also known in Javanese tradition as Sunan Kudus, the son of Sunan Ngudung from Demak (Graaf). The original mosque was said to be rather small in structure- with two tiered pyramidal *(tajug)* roof and an open *serambi* with *atap limasan* (gable roof). The roof was covered with wooden shingles, and the top of the roof ridge was ornamented with *mustaka* (crown). A major renovation to the mosque was done in 1918-1919; when the floor area of the mosque was enlarged and extended to include the surrounding *serambi* (Figure 4-46). The roof line was extended thereby making the roof structure to be three-tiered *tajug* construction. The entry porch was also constructed to include a dome structure (Figure 4-47). The old wall materials were replaced with new bricks with cement rendered finish.



EDITED FROM: ARCHIVE, FAKULTAS ARKEOLOGI, UGM

Figure 4-46 The floor area of the main prayer hall was enlarged to include the surrounding *serambi*



EDITED FROM: ARCHIVE, FAKULTAS ARKEOLOGI, UGM

Figure 4-47 Cross-section drawing indicating the mosque dome

The mosque complex is divided into two main activity areas: one for the mosque visitors, the other for *ziyarah* activities of the tomb complex. The mosque and the tomb have separate entrances marked with gateways and fencing. The minaret is located to the east of main prayer hall near the main entrance and becomes a dominant landmark signifying the entrances for both the mosque and the tomb (Figure 4-48). This minaret, which is famous for its design reminiscent of *Kul Kul* tower (bell tower) of Hindu Javanese temple, incorporates a big *beduk* (wooden drum) hung from the roof beam of its uppermost level with the two-tiered roof form (Figure 4-49).

Figure 4-48 The minaret is located to the east of main prayer hall near the main entrance.

PHOTO CREDIT: ALI AKBAR

Figure 4-49 The interior view of the minaret of Masjid Menara Kudus with its two-tiered roof and *beduk*

An important design element which is clearly present is the *qibla* axis, formed by the alignment of the entrance gateway in the form of *candi bentar* (Figure 4-50) and two *paduraksa* doorways that can be found in the main prayer hall leading to the *mihrab* (Figure 4-51 and 4-52).

Figure 4-50 Entrance gateway in the form of *candi bentar*

Figure 4-51 First *paduraksa* doorways that can be found in the main prayer hall

Figure 4-52 Second *paduraksa* doorways leading to the *mihrab*

The tomb complex has its own entrance from the east and it is totally segregated from the mosque area by surrounding brick walls to the height of approximately 2.5 meter. The main entrance of the tomb is located to the left of the minaret in the form of *paduraksa* gateway with a *cungkup* structure built on top of it (Figure 4-53). Three successive gateways in the form of *paduraksa* bring the visitors to the inner part of the tomb complex which is arranged in north-southern axis. The most northern part of the complex is considered the most sanctified (Irwan Suhanda (ed), 2006) and it is here that one finds the mausoleum of Sunan Kudus located under a *cungkup* (Figure 4-54).

PHOTO CREDIT: ALI AKBAR

Figure 4-53 The main entrance of the tomb is located to the left of the minaret in the form of *paduraksa* gateway with a *cungkup* structure built on top of it

Figure 4-54 The tombs of Sunan Kudus and family members located under a *cungkup*

4.2.6 MASJID AGUNG DEMAK, CENTRAL JAVA

Location:	Demak, Central Java, Indonesia[55]
Date:	15th century[56]
Condition:	Maintained old forms although wall materials and roof coverings have been changed.
Original Patron:	Raden Fatah
Material:	Wooden structural members with cement rendered bricks in walls.
Significance:	Historical: An important Islamic Sultanate in the 16th century. Architectural: recognized as the prototype of other pyramidal roof mosques in the region.
Stylistic Influence:	Vernacular

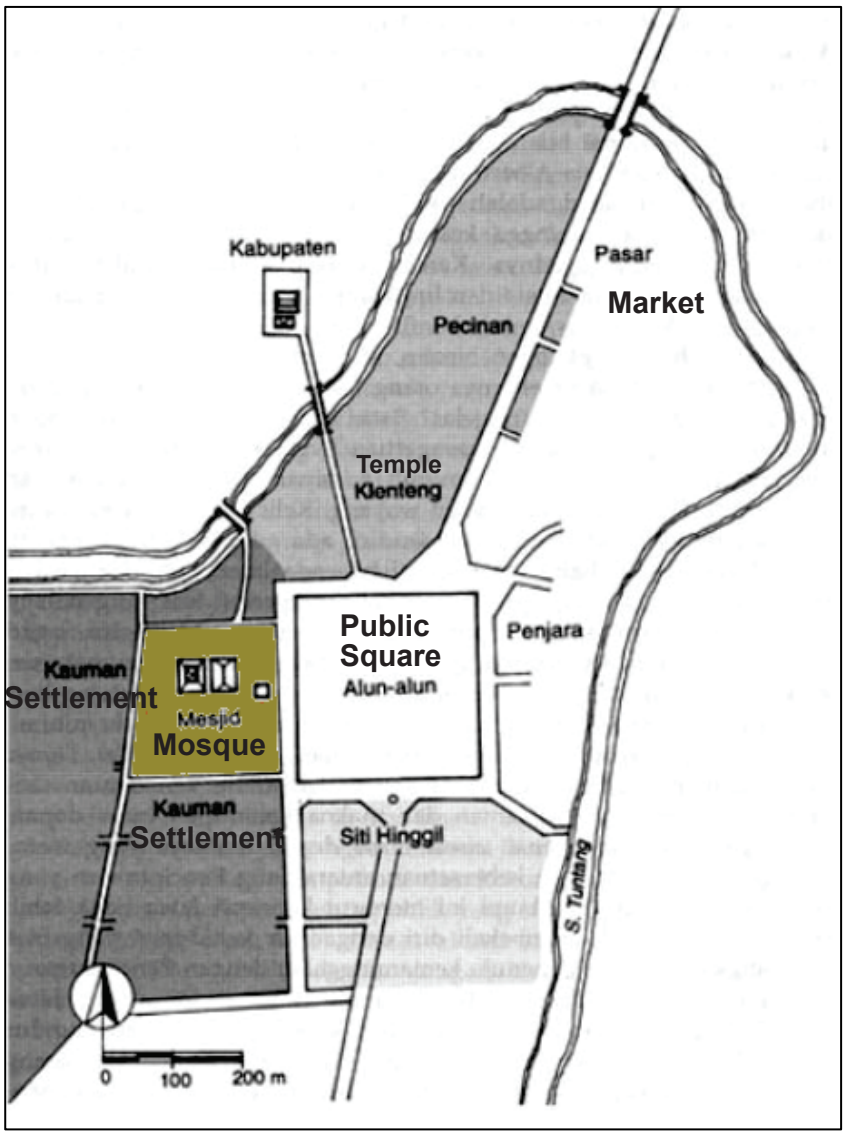
Table 4-7 Masjid Agung Demak background data

Figure 4-55 Masjid Agung Demak exterior view

[55] Main source of information (Ashadi, 2006, pp. 48-62)

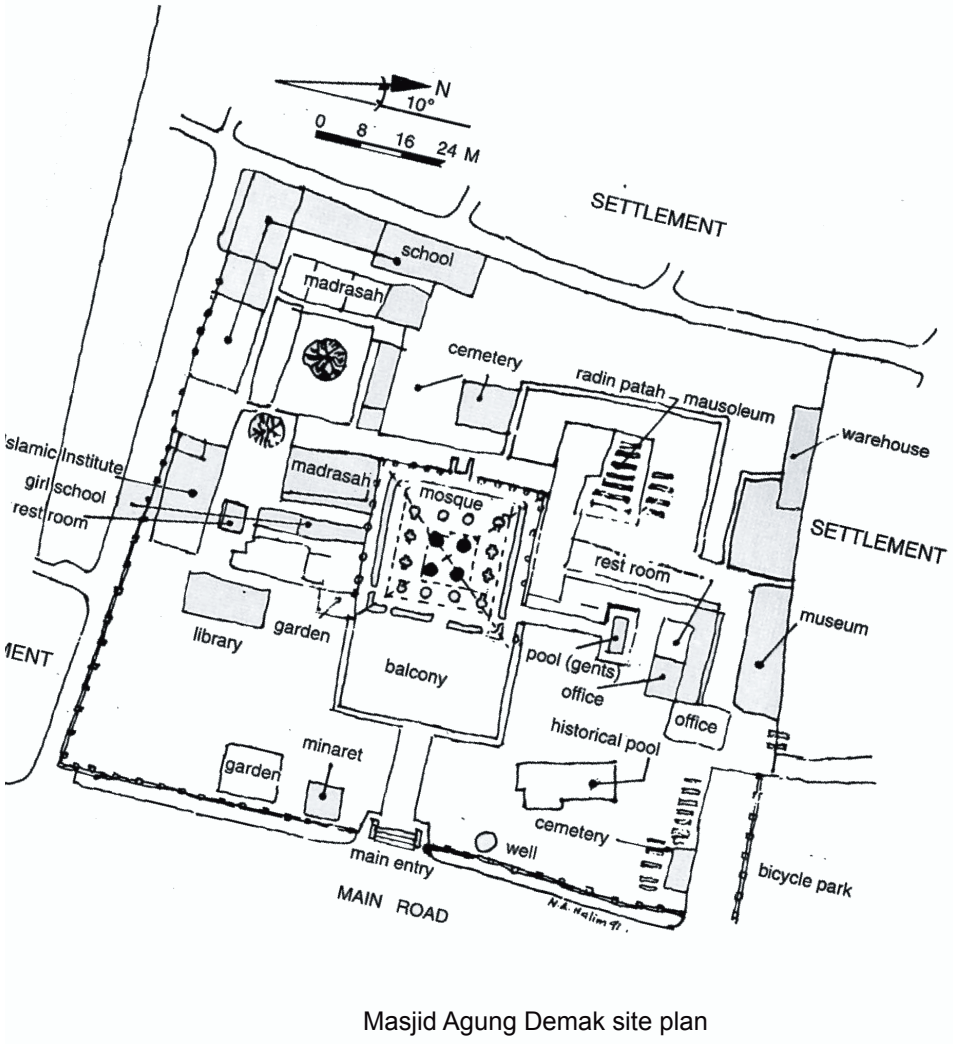
[56] Based on the inscription found above the *mihrab*, written in Javanese *"rupa brahmana warna sari"*, the mosque was founded on 1481 Saka equivalent to 1559 A.D. The *serambi* is a recent addition, built in 1950s (Ashadi, 2006)

Masjid Agung Demak is located in the town of Demak which was historically the first Islamic Sultanate in the Java Island. Demak is approximately 25km to the northeast of Semarang – on the northern coast of Central Java. In the 15th century, the town was much closer to the coast and had functioned as an important sea port. Demak's history itself is intertwined with the stories of the nine *walis (wali songo),* the spread of Islam in Java and the fall of Majapahit Hindu kingdom (Prijohoetomo, 1928-9, p. 263).



SOURCE: (BAMBANG, 2000B)

Figure 4-56 Masjid Agung Demak location plan



Masjid Agung Demak site plan

SOURCE: (ABDUL HALIM, 1994)

Figure 4-57 Masjid Demak site plan

Masjid Agung Demak is built on a land of approximately 1.5 hectare and it was historically placed to the west of *alun-alun*, at the intersection of the main roads within Demak ruling centre. To the south and west of the mosque complex are the Kauman villages[57]; the north was the commercial centre for Demak city whereby one finds the markets and Chinese settlements within the Pecinan village. South of the alun-alun is

[57] According to Ashadi (2006) the village Kauman was the settlements for religious people who were actively participating in the mosque activities. Kauman is an acronym for '*kaum iman'* which literally translated as 'a group of faithful people'.

Sitinggil (or Siti Hinggil) which was believed to be the site of the Demak Sultanate's palace (keraton) which was destroyed during the civil war in 1546 – 1549 (Ashadi, 2006; Tjandrasasmita, 2000b) (Figure 4-58).

The building of the mosque is believed to have started sometime before 1478 and completed by the turn of the 16th century (if not earlier). This is based on the information gathered from different sources; in *Babad Demak* the date of built is said to be Saka 1399 or 1477 C.E. during the rule of Raden Fatah (Ashadi, 2006; Irwan Suhanda (ed), 2006); while in *Catatan Melayu: Teks Parlindungan* it is narrated that the mosque was completed in the year 1481 C.E. In *Babad Tanah Jawa* it is narrated that during the construction of the mosque, Demak was involved in the war against Majapahit – giving the date of construction to be in the year 1478 (Ashadi, 2006). A chronogram in the form of a turtle located at the mihrab indicated that the mosque was built in the year Saka 1401 or 1479 A.D.(Irwan Suhanda (ed), 2006). However another inscription found written in Javanese above the main door *(Lawang Bledeg)* of the mosque stated the completion of the mosque to be on 1st Dzul-qaídah 1428 A.H. (or 1506 C.E.) (Figure 4-59).

SOURCE: INFORMATION CENTRE, MASJID AGUNG DEMAK

FROM BOTTOM - TOP: (1) THE MOSQUE IN 1900S – WITHOUT THE GATEWAY AND MINARET; (2) PHOTOGRAPH TAKEN IN 1962 – A REGOL/GAPURA (ROOFED GATEWAY) (C.1848) AND THE MINARET (1932) ARE INCLUDED IN THE EXTENSION OF THE MOSQUE; (3) MASJID AGUNG DEMAK IN THE 1970S – WITHOUT THE ROOFED GATEWAY

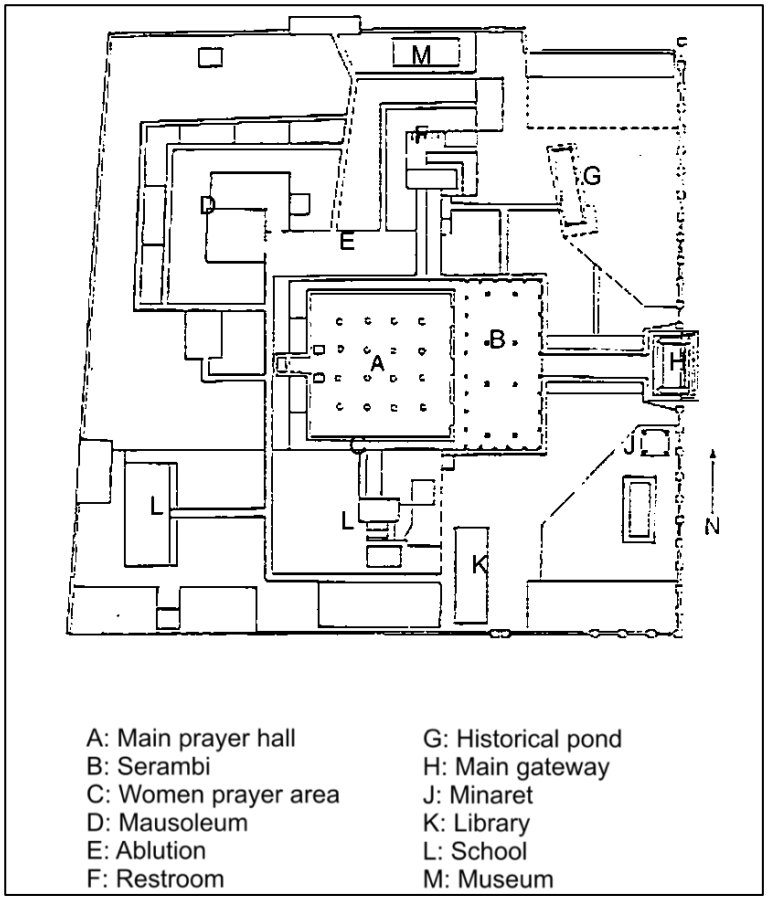
Figure 4-58 Changes in Masjid Agung Demak

Figure 4-59 *Lawang Bledeg*, showing Chinese influence

In *Jejak Para Wali dan Ziarah Spiritual* it is stated that the four main pillars (*soko guru*) which supported the uppermost roof structure were erected by four of the *walis*: Sunan Ampel, Sunan Gunung Jati, Sunan Bonang and Sunan Kalijaga. The direction of the *qibla* was established by Sunan Kalijaga (Irwan Suhanda (ed), 2006).

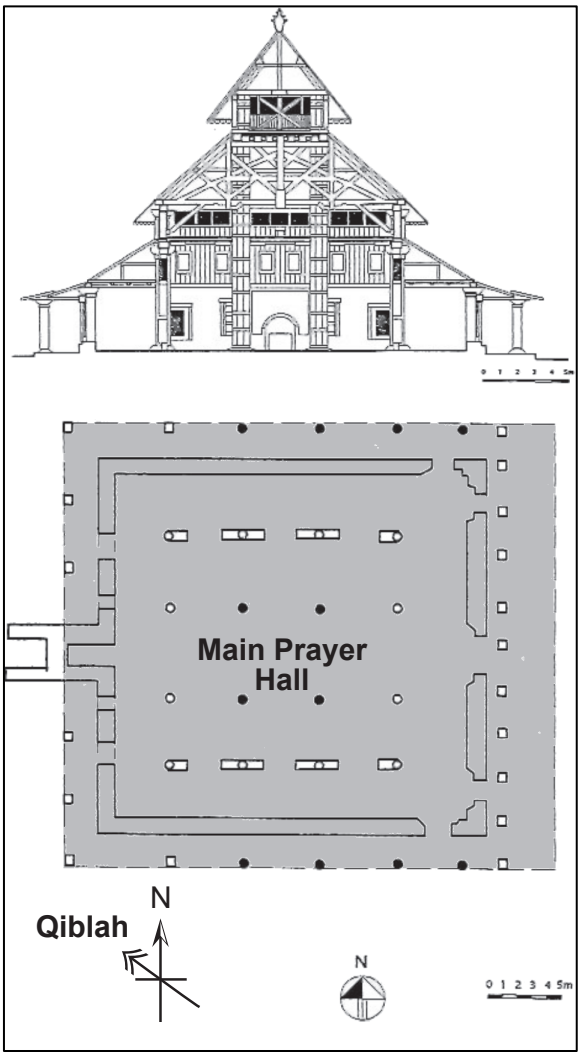
The mosque complex is basically made up of:

- The main building: the main prayer hall, serambi and pawestren
- The minaret (added in 1932) located to the east of main hall
- The tomb of Demak rulers and family members (north and north-west of the main hall), tomb of Sheikh Maulana Maghribi (west of main hall).
- *Madrasah* (added 1936) located to the south of the main building
- Museum, visitors centre and community clinic (after 1971) located to the north of the mosque complex.



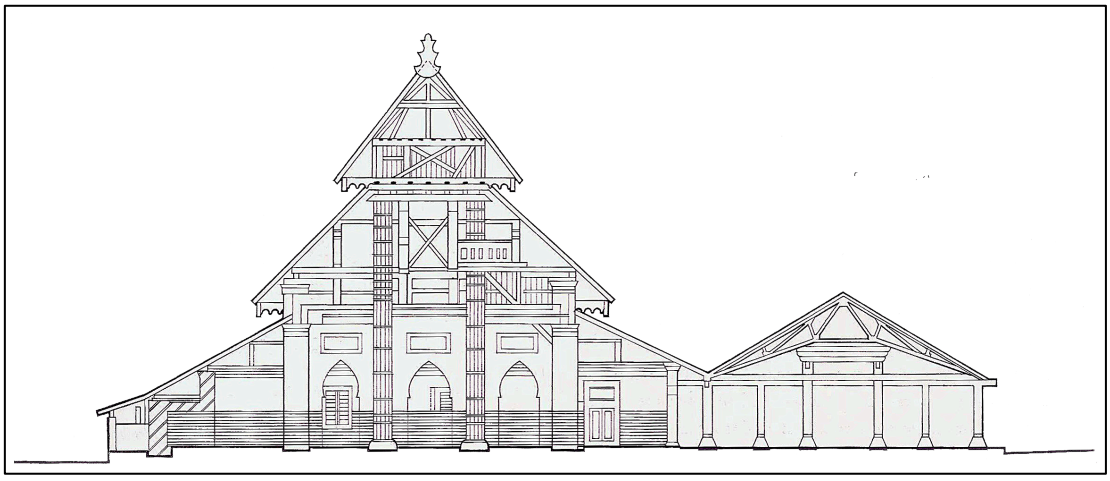
SOURCE: (O' NEILL, 1994)

Figure 4-60 Masjid Agung Demak site and floor plan layout



EDITED FROM: (O' NEILL, 1994)

Figure 4-61 Masjid Demak prayer hall floor plan layout and cross-section



SOURCE: (O' NEILL, 1994)

Figure 4-62 Masjid Agung Demak main prayer hall and *serambi* extension cross-section drawing

Masjid Agung Demak has undergone many renovations over the years – they are well documented and information is available from the museum located within the mosque's compound. Based on the archaeological reports (1985-6) the roof material of the mosque was changed to tiles in 1924-1926; in 1936 a *madrasah* was built to the south of the main building; in 1966-67 the gateway was rebuilt to its current design.

A pool known as *'kolam bersejarah'* was included at the south-eastern compound of the mosque as well as rebuilding of ablution facilities to the north and south of the main prayer hall. The final major renovation and refurbishment of the mosque was undertaken between 1971-4 by a team made up of conservationists, archaeologists and contractors which involved the additions of visitors centre, replacement of wall materials with concrete, refurbishment of tomb complex and toilet facilities.

The graves in the tomb complex can be divided into three clusters:

Makam Kasepuhan – the burial place for the first Sultans of Demak and their family members such as Raden Fatah (first Sultan) and Raden Patiunus (second Sultan). Their tombs are located to the north-west of the main prayer hall in a fenced area.

Makam Kaneman – the burial place of Raja Trenggono, the third Sultan of Demak and his family members. They are all located under a two-tiered pyramidal cungkup which house 24 graves belonging to the family of Sultan Trenggono. All the graves length are made to extend to more than 2 meter long, as according to folk's beliefs the length of the grave corresponds to the sacrosanct of the person.

Tombs of other dignitaries – buried in various locations around the mosque; mainly occupying the western and northern part of the complex.

4.2.7 MASJID AGUNG BANTEN

Location:	Kota Serang, Banten[58]
Date:	1552-1570
Condition:	Good, well maintained
Original Patron:	Sultan Maulana Hasanuddin, son of Sunan Gunung Jati
Material:	Wooden structural members with cement rendered bricks walls and minaret
Significance:	Historical: An important Islamic Sultanate in the 16th century. Architectural: a seven-tiered pyramidal roof structure[59], one of the earliest mosques to incorporate a minaret (built in 1620).
Stylistic Influence:	Vernacular

Table 4-8 Masjid Agung Banten background data

Figure 4-63 Masjid Agung Banten tiered roof exterior view

[58] Main source of information (Guillot, 1993; Mundardjito et al., 1976)

[59] Although the top two levels are purely ornamental

Masjid Agung Banten is located in a town now known as Banten Lama, in the village of Kasemen, under the district of Serang. Banten itself is a small town on northern coastal region of Central Java, approximately 100 kilometres to the west of Jakarta. The mosque was built by the first Muslim ruler of Banten, Sultan Hasanuddin (r.1527 – 1570) in around 1556 and continued by his son Maulana Yusuf (r.1570 – 1580).

Located in the heart of the city, Masjid Agung Banten was easily accessible from the main roads and the Ci-Banten river. It is placed to the west of the royal square *(paseban)* in close distance to Banten's major markets and community settlements. Its location within the ruling centre meant that the mosque took up the role as a Sultanate Mosque used for state ceremonies.

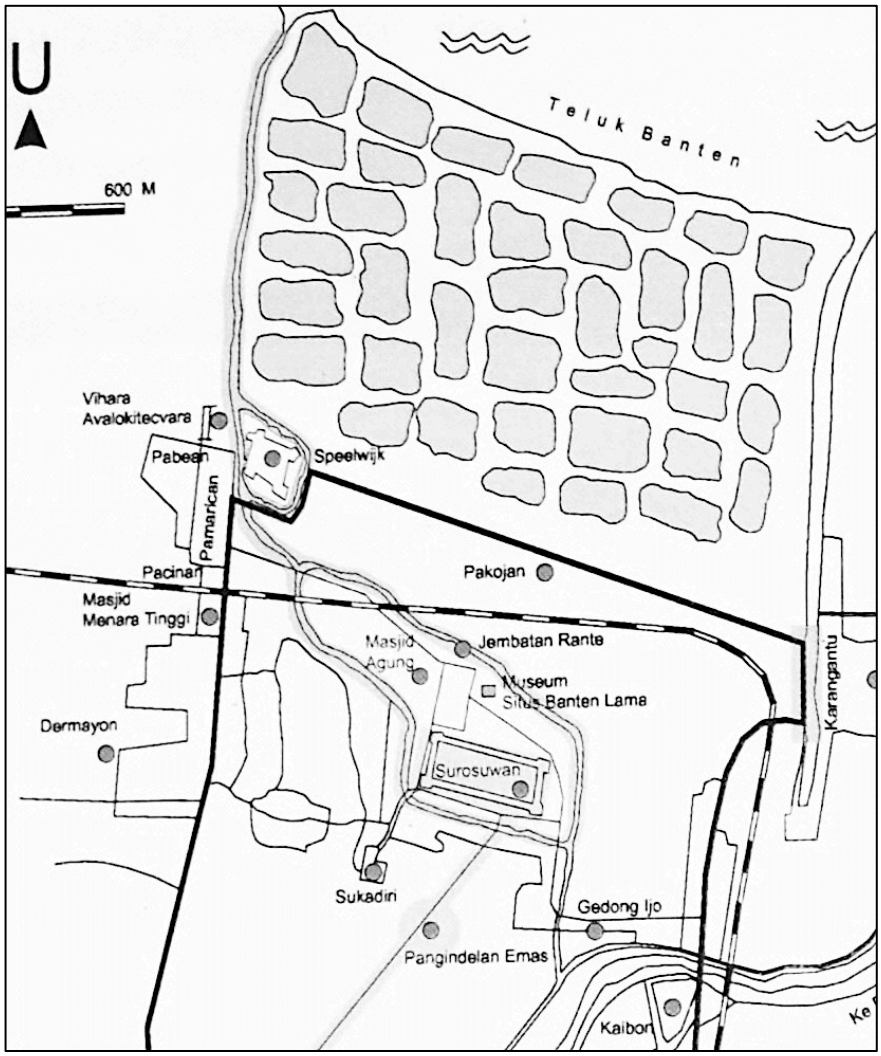


Figure 4-64 Masjid Agung Banten location plan

The mosque complex is made up of several components: the main building and its *serambi,* the *Tiyamah* (south of main prayer hall), the minaret (east of main prayer hall) and the mausoleum.

The main entrances of the mosque complex are located to the north and south of the mosque compound; demarcated by white arched gateways with highly stylised top. The gateway on the north is a direct access to the northern mausoleum located under a *cungkup;* while the south gateway brings the visitors towards the main entrance of the mosque which is approached from the east.

Figure 4-65 Gate entrance to the tombs of Banten rulers

The tombs of Banten rulers and dignitaries are places in two main areas: north and south of the main prayer hall. The north cemetery is called *Sebakingking*, accessible through a gated corridor. Under the *cungkup* are the tombs of four of the early rulers of Banten. In it lies the tomb of Maulana Hasanuddin, the first ruler of Banten who died in 1570, his grandson Maulana Muhammad (the third ruler) who was killed in a war against Palembang in 1596, Sultan Ageng Tirtayasa (the fifth ruler) who died while in captivity in Batavia in 1692 and Sultan Haji (the sixth sultan who seized power from his father – Sultan Ageng Tirtayasa with the help of Dutch East Indies Company) who died in 1687. Absent from the list is the tomb of Maulana Yusuf (the second ruler) and

Sultan Abdul Mafakhir Mahmud Abdulkadir (the fourth ruler). Maulana Yusuf was buried in Pakalangan south of the city, and the the tomb of Abdul Mafakhir is in Kenari, near Taman Sari (Guillot, Ambary, & Dumarçay, 1990, p. 57). To the south of the mosque are the tombs for various sultans who reigned during the 18th and early 19th century. While Sebakingking is located separated from the main mosque building and adjoined to it by a covered veranda *(cungkup),* part of the southern tomb is located under the main roof of the mosque.

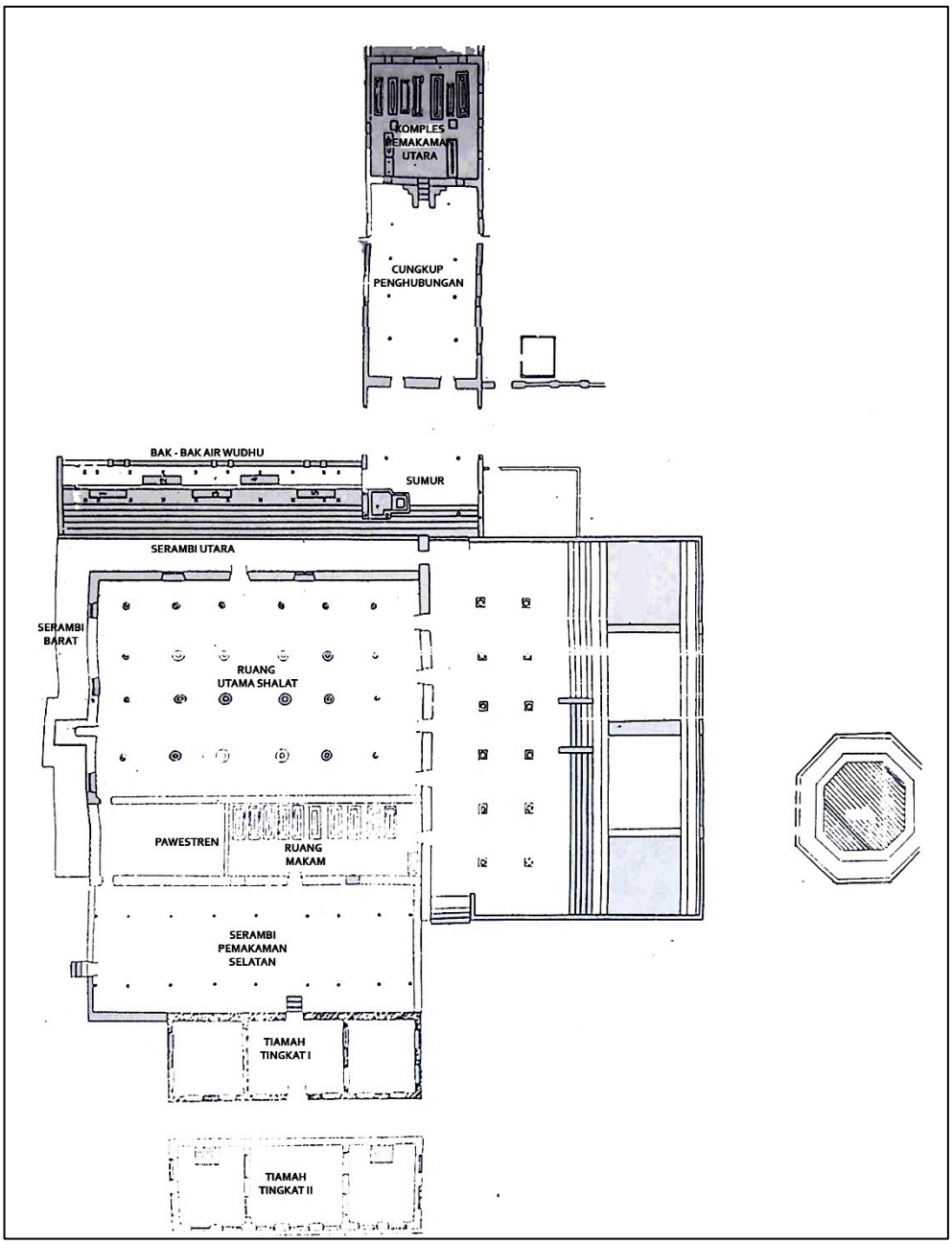


Figure 4-66 Masjid Agung Banten floor plan

Figure 4-67 Water pools with water usually covering the feet of mosque visitors. During the visit to the mosque, the pools were nearly dry due to drought.

Figure 4-68 Masjid Agung Banten *serambi* (veranda)

Figure 4-69 Masjid Agung Banten interior view

Figure 4-70 Masjid Agung Banten *mimbar*, *mihrab* and the *qibla* wall

Figure 4-71 Masjid Agung Banten minaret

4.2.8 MASJID AGUNG CIREBON KASEPUHAN, WEST JAVA

Location:	Cirebon[60]
Date:	End of 15th century
Condition:	Modified and extended, but retained original form
Original Patron:	Sunan Gunung Jati
Material:	Wooden structural members with cement rendered bricks walls
Significance:	Historical: Sultanate Mosque Architectural: a three-tiered pyramidal roof structure, with rectangular (instead of square) floor plan
Stylistic Influence:	Vernacular

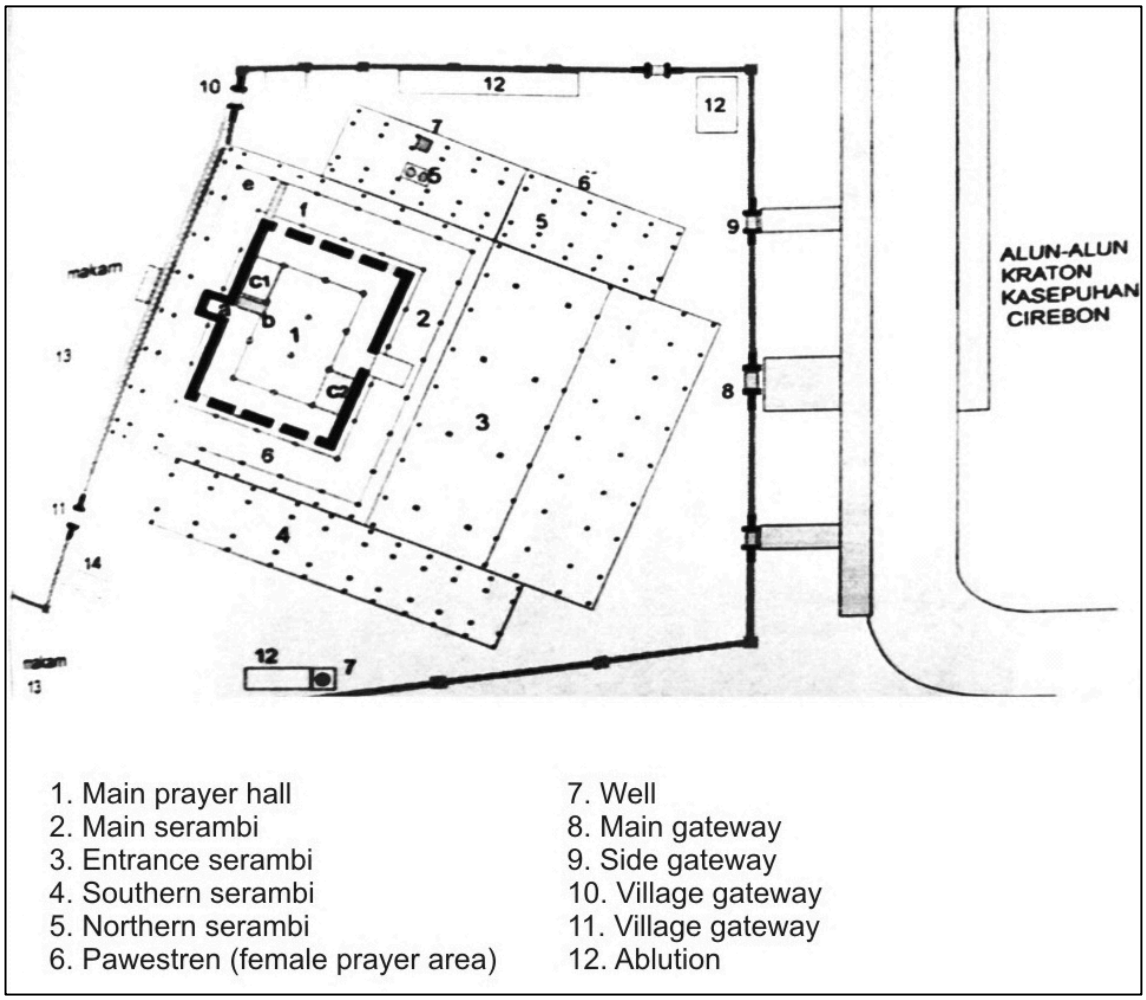
Table 4-9 Masjid Agung Cirebon background data

SOURCE: (MASJID 2000)

Figure 4-72 Masjid Agung Cirebon, view from entry gate

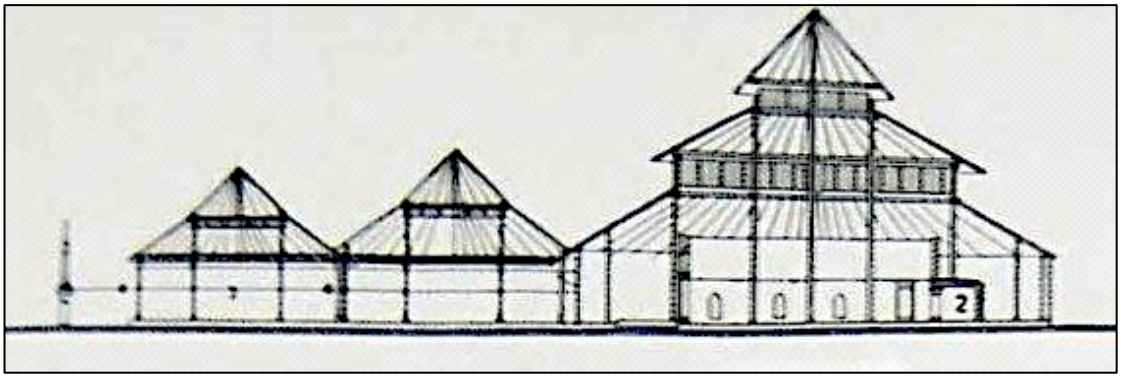
Masjid Agung Cirebon (MAC) also known as Masjid Sang Ciptarasa is located to the west of the kraton's alun-alun. It was built by several members of the *wali* in late fifteenth century, led by Sunan Gunug Jati.

[60] Main source of information (Ambary, 1997) and compilation of Javanese mosques data in (Masjid 2000) documented by students of Institiut Teknologi Bandung (ITB)



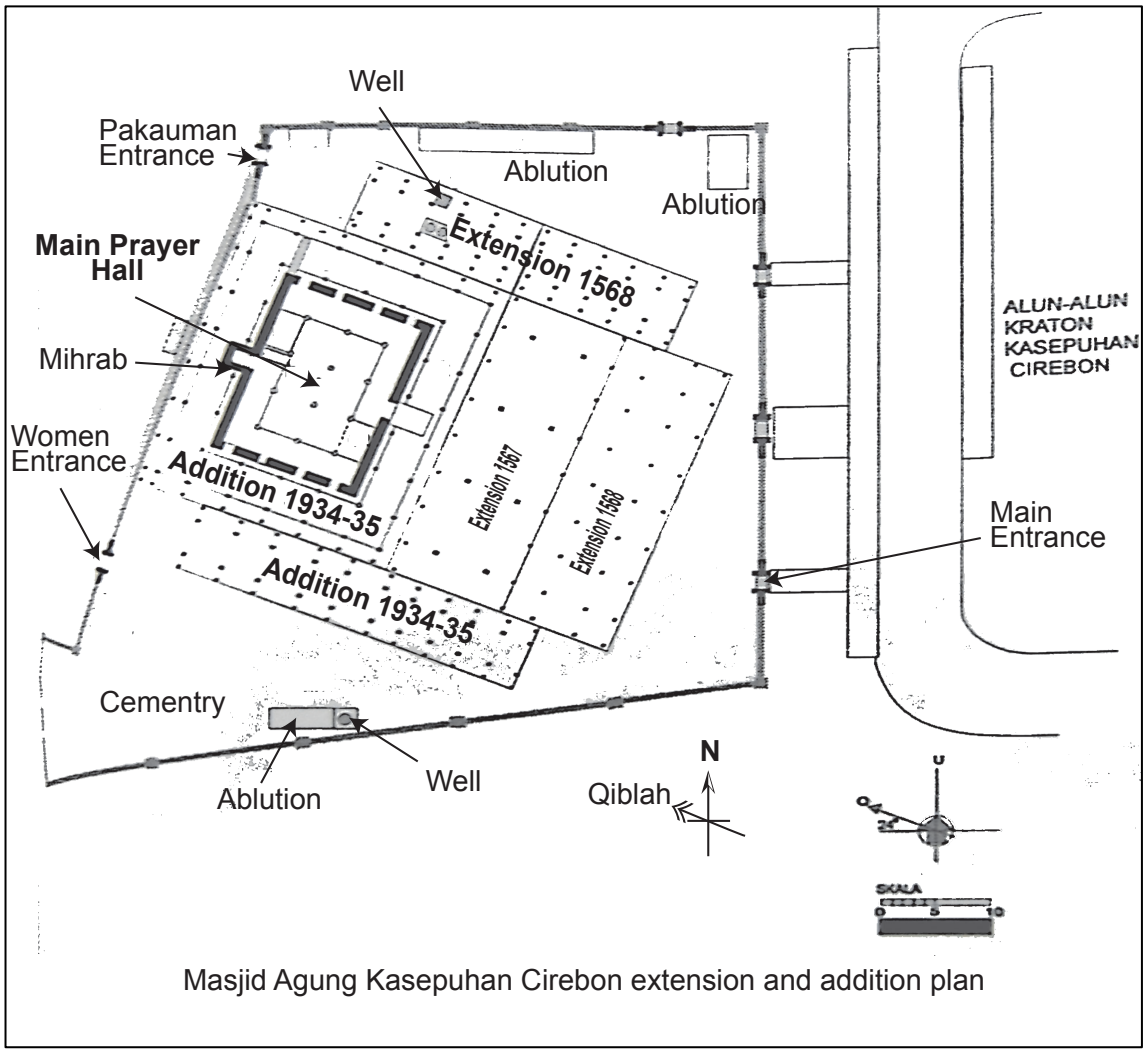
SOURCE: FAKULTAS ARKEOLOGI, UGM

Figure 4-73 Masjid Agung Cirebon site plan

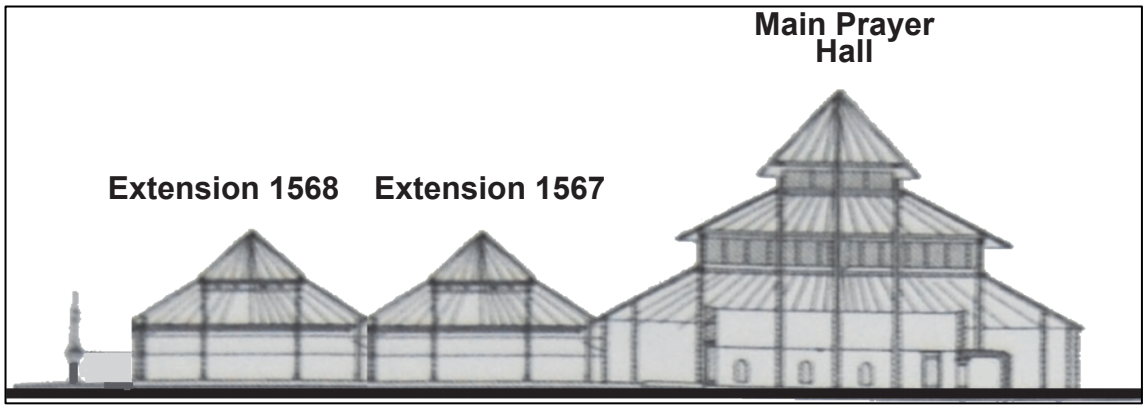


SOURCE: FAKULTAS ARKEOLOGI, UGM

Figure 4-74 Masjid Agung Cirebon cross-section drawing

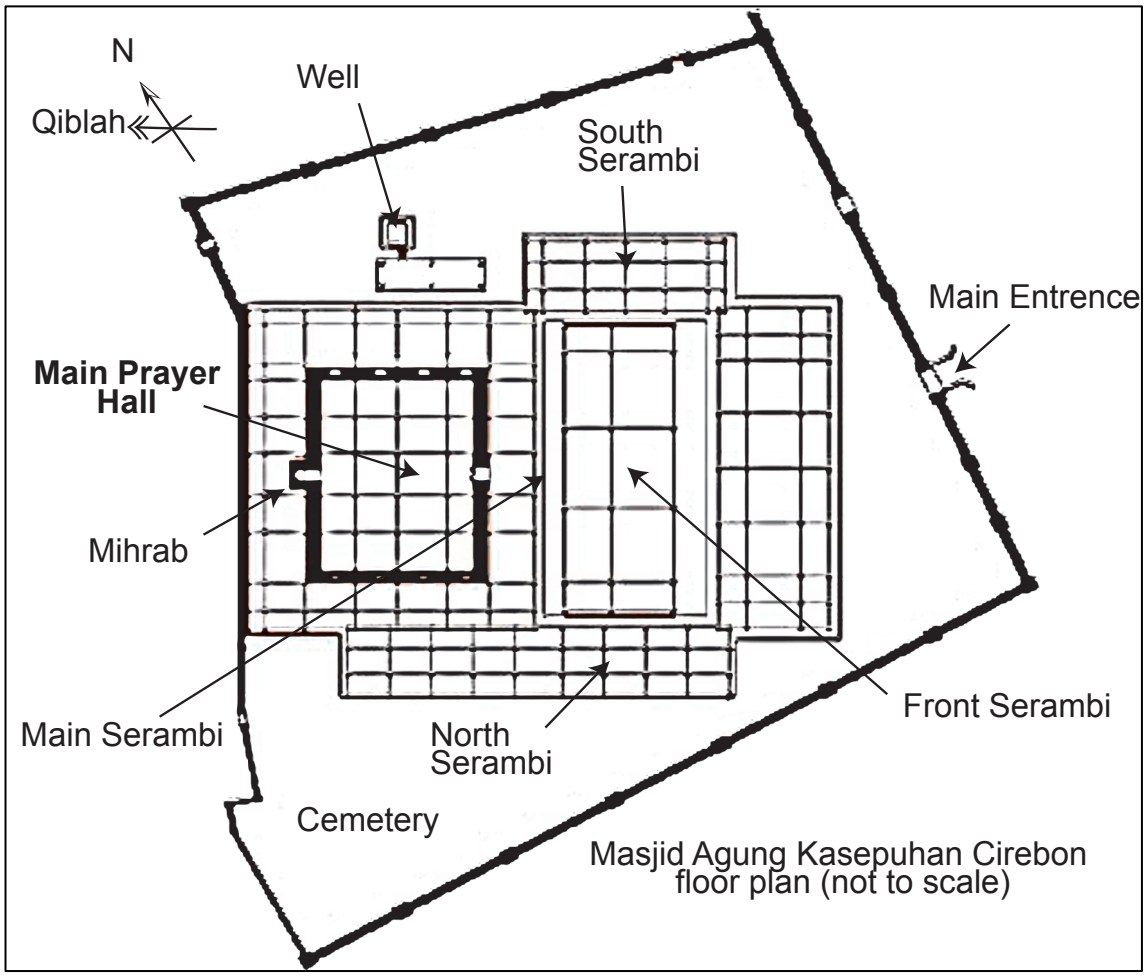


Masjid Agung Kasepuhan Cirebon extension and addition plan



SOURCE: FAKULTAS ARKEOLOGI, UGM

Figure 4-75 Masjid Agung Kasepuhan Cirebon extension plan (top) and cross-section drawing (bottom)



EDITED FROM: (MASJID 2000)

Figure 4-76 Masjid Agung Cirebon Kasepuhan floor plan layout

Figure 4-77 Masjid Agung Cirebon main prayer hall roof structure

MAC is unique due to its three tiered gable roof system (*limasan tiga tumpuk*) in contrast to the *tajug* (pyramidal) system often employed in Javanese mosque architecture. The roof form produces a rectangle rather than a square prayer hall floor plan. There are 12 main pillars and 18 perimeter columns supporting the roof structure. Currently the wooden pillars are mainly decorative, as the load of the roof is carried by steel columns which are placed surrounding the pillars to provide additional strength.

Figure 4-78 Masjid Agung Cirebon *Serambi Girilaya* roof structure

MAC has been renovated a few times. During the rule of Panembahan Ratu I (1568-1649) the southern *serambi* (*Prabayaksa*) and the eastern *serambi* (*Pamandangan*) were constructed adjoining the main prayer hall. In 1567, another *serambi* was built to the east of *Pamandangan* by Panembahan Girilaya from whom this *serambi* was named after (*Serambi Girilaya*). In 1679, Sultan Sepuh I added another *serambi* to the front of *Serambi Girilaya*. The final addition to the existing structure was made in 1934-5 under the rule of Sultan Sepuh XI to the side of *Prabayaksa*.

Figure 4-79 Main entrance to the prayer hall with marble pilasters

Figure 4-80 The *mihrab* of Masjid Agung Cirebon

Figure 4-81 The *mimbar* of Masjid Agung Cirebon

Figure 4-82 Old wells at Masjid Agung Cirebon; their water is believed to have healing power

4.2.9 MASJID MERAH PANJUNAN, WEST JAVA

Location:	Cirebon[61]
Date:	1435/ 1480[62]
Condition:	Good, well maintained.
Original Patron:	Sharif 'Abd al-Rahman al-Baghdadi (Pangeran Panjunan)
Material:	Wooden structural members with cement rendered bricks walls
Significance:	Historical: Panjunan from the word "*anjun*" which means clay tiles, the town was historically known as centre for ceramic artwork. Architectural: a two-tiered pyramidal roof structure, with 'umbrella' structural configuration
Stylistic Influence:	Vernacular

Table 4-10 Masjid Merah Panjunan background data

Figure 4-83 Masjid Merah Panjunan

[61] Main information from (Massarik & Brakel, 1982) and Masjid 2000

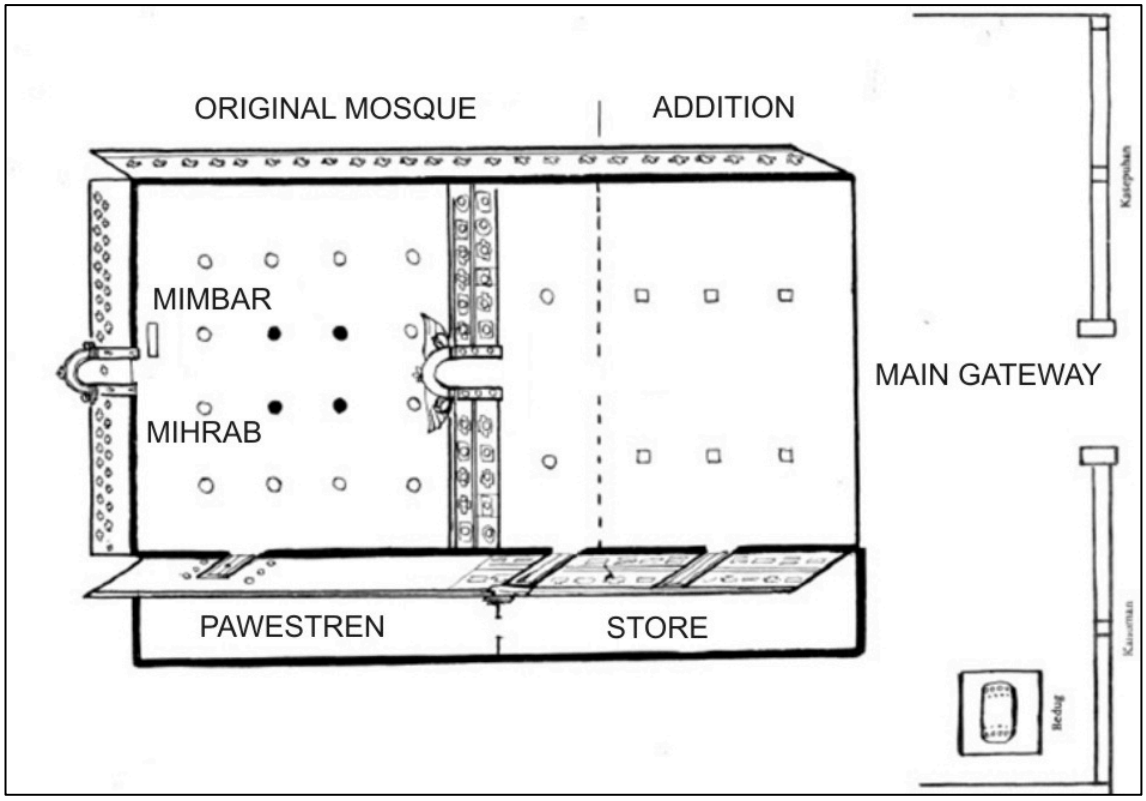
[62] Based on Kitab Carob Khanda

Masjid Merah Panjunan (MMP) is located in Kecamatan Lemah Wungkuk, not too far from the royal palace of Cirebon. It is believed to be built by Pangeran Panjunan Syarif 'Abd al-Rahman al-Baghdadi[63](originated from Iraq) in 1435 (*Kitab Carob Khanda*). The mosque compound is fenced with red brick walls at the height of 1.2 meter with a split gate main entrance. The walls are decorated with ceramic plates infill in the same techniques found in Masjid Agung Demak, Masjid Kudus and Masjid Agung Cirebon. Gunungan or stupa decorated the top of the fence. However according to research done by the students of Institiut Teknis Bandung (ITB) the ceramic plates found in-situ at the mosques were brought from the *kraton* and not the original pieces.

Figure 4-84 The main gateway of Masjid Merah Panjunan.
The empty medallions on the walls were once filled with ceramic tiles.

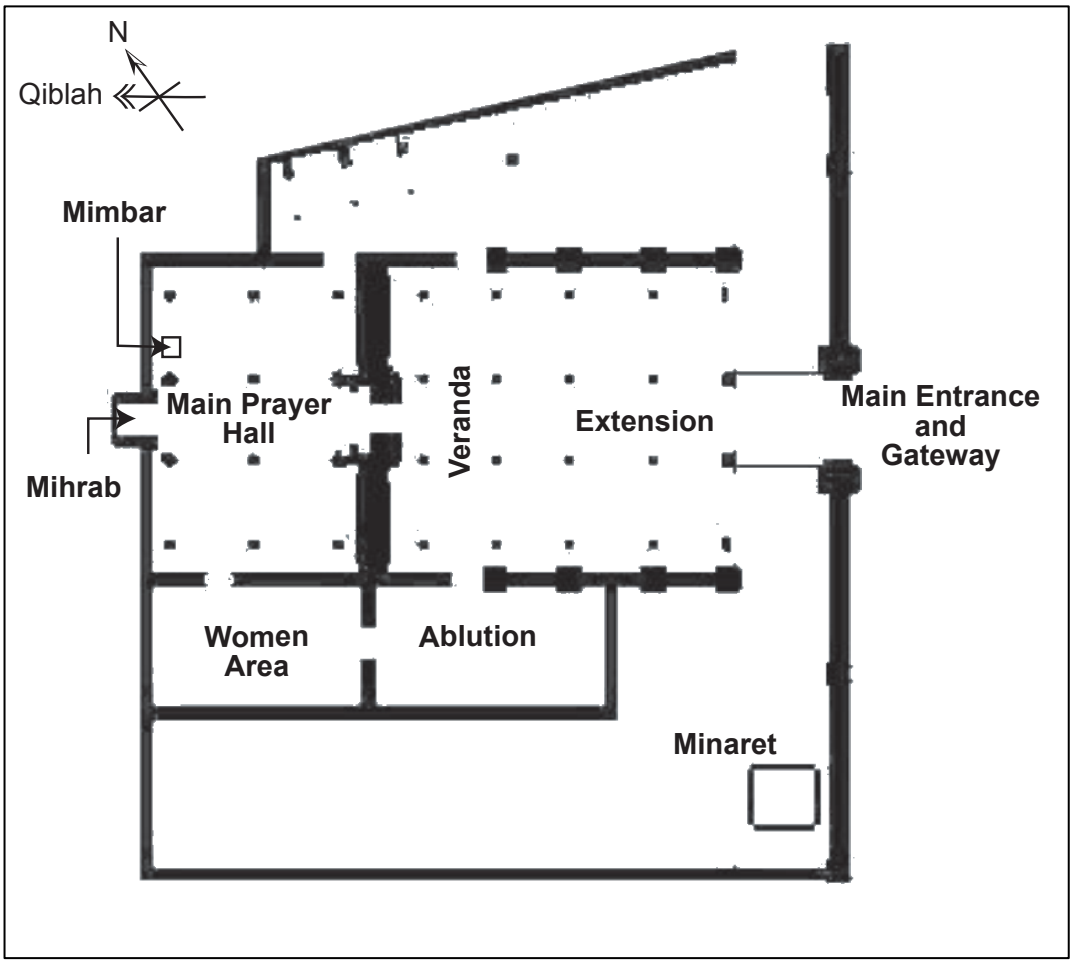
[63] He was the brother-in-law of Sunan Gunung Jati (Masjid 2000 – cited from Hasan Efendi and R. Sumanang, 1994).

Figure 4-85 Masjid Merah Panjunan: protruding structure houses the *mihrab*



SOURCE: (MASSARIK & BRAKEL, 1982)

Figure 4-86 Masjis Merah Panjunan floor plan



SOURCE: (MASJID 2000)

Figure 4-87 Masjid Merah Panjunan floor plan layout .
The minaret in this plan and the beduk in Massarik & Brakel's plan were not present during the fieldtrip

The mosque employed structural system of *tajug lambang teplok* with four main pillars and twelve perimeter columns (Figure 4-88). The roof of the main prayer hall is exposed forming umbrella construction which provides pleasing ceiling-roof profile as well as emphasizes the vertical axis (Figure 4-89). Currently, the main prayer hall is closed from the public and is only opened twice a year during the congregational prayers of the two *'Ids.*

Figure 4-88 The umbrella structure

Figure 4-89 *Serambi* of Masjid Merah Panjunan, currently used for congregational prayers

The *serambi* which currently forms as the prayer hall, is a half opened area built in the architecture of the *pendopo.* It is a square hall of approximately 9 x 9 meters with a winged doorway connecting it to the main prayer hall. This winged doorway is embellished with embedded ceramic plates forming medallion design layout and currently forms as a marker of the *qibla* (*mihrab*) (Figure 4-89).

The winged door and the original *mihrab* located in the inner prayer hall forms the *qibla* axis. The *mihrab* is in the form of a niche with arched top and has three-dimensional cloud ornamentation at its centre top. An old *mimbar* sits to the right of the *mihrab*. The *mimbar* is also in the form of winged gate with the edges of the top arch forming upward curls. It is unclear if the original form was more elaborate than what is now, however the *mimbar* is currently in the form of structural frames without any covering panels. It resembles the form of *mimbars* found in Sendang Duwur and Cirebon, without the elaborate carving panels (Figure 4-91).

SOURCE: (MASJID 2000)

Figure 4-90 Masjid Merah Panjunan 3D structure drawing

Figure 4-91 Masjid Merah Panjunan *mimbar*

4.2.10 MASJID BAYAN BELEQ, IRIAN JAYA

Location:	West Lombok[64]
Date:	c. 16th century
Condition:	Good, well maintained.
Original Patron:	Village Chief
Material:	Wooden structural members with woven bamboo wall cladding
Significance:	Historical: oldest surviving mosque in Lombok Architectural: a two-tiered pyramidal roof structure, with vernacular building materials
Stylistic Influence:	Vernacular

Table 4-11 Masjid Bayan Beleq background data

SOURCE: (BENNET, 2005, P. 249)

Figure 4-92 Masjid Bayan Beleq exterior view.

Masjid Bayan Beleq (MBB) is located in the village of Bayan, Desa Bayan, Lombok Barat in the provincial state of Nusa Tenggara Barat. It is built on a small mountain at a level of approximately 5 meters from the ground level. It is believed to

[64] Main information from the book '*Masjid Kuno Indonesia'* (1999), published by Direktorat Perlindungan dan Pembinaan Peninggalan Sejarah dan Purbakala, Indonesia.

have been built by the village leader (whose name is unknown) who was the first the convert to Islam when Islam reached the region in the 16th century.

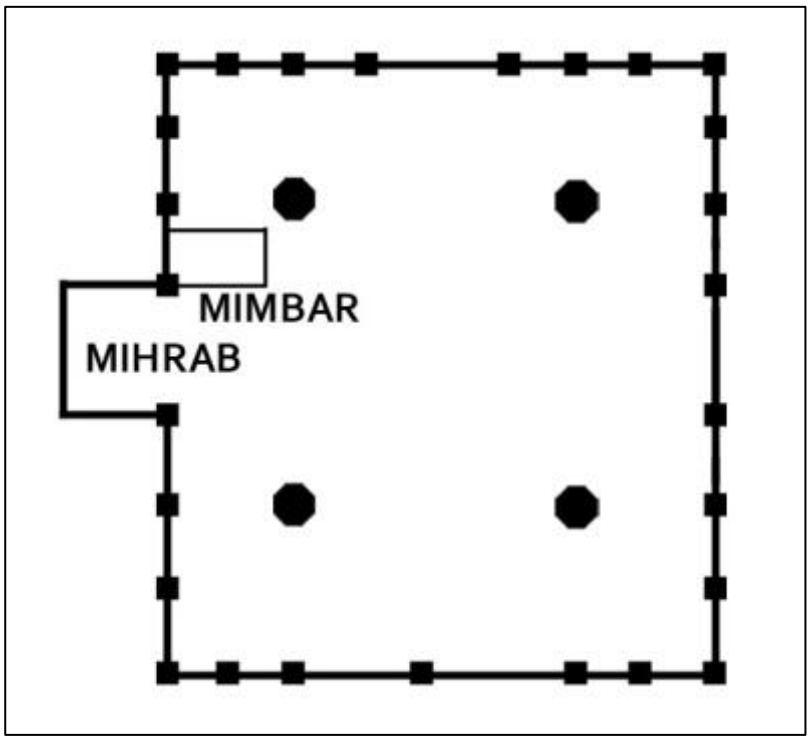


Figure 4-93 Masjid Bayan Beleq simple square floor plan

MBB has a two-tiered pyramidal roof with ornamental *mustaka* (crown) finial. The roof covers a square plan prayer hall with the size of 8.9 meter by 8.9 meter. The roof is supported by 4 main pillars and 28 perimeter columns. The four main pillars *(soko guru)* are round in perimeter and made from jackfruit wood with a diameter of 0.23 meter and height of 4.60 meter. The pillars sit on monolith stones pediments. The wall is constructed using wood and bamboo.

Inside the prayer hall, the *beduk* is seen to be hung with a rattan rope from the beam of the uppermost roof. To the right is the *mimbar* which has a figure of a *naga* with its body decorated with twelve, eight and seven pointed stars motifs. The body of the *mimbar* was carved with decorations depicting trees, chicken and eggs. The symbolism of these motifs is unknown. The mosque's compound is filled with six *cungkup* made of bamboo which covered the tombs of Bayan Beleq's *ulama* namely Plawangan, Karang Salah, Anyar, reak, Titi Mas Penghulu and Sesait.

4.3 17-18TH CENTURY MOSQUES

4.3.1 MASJID KEBON JERUK, JAKARTA

Location:	Jalan Hayam Wuruk, Jakarta[65]
Date:	1787-1797
Condition:	Extensively renovated, concealing original structures
Original Patron:	Chinese Muslim community led by Chan Tsin Hwa
Material:	Cement-rendered brickworks
Significance:	Historical: one of the earliest extant mosques in Jakarta, built by Chinese Muslim community
Stylistic Influence:	Old part: Chinese influence; New building: contemporary

Table 4-12 Masjid Kebon Jeruk background data

PHOTOGRAPH ABOVE TAKEN AROUND 1920S SHOWING THE TWO-TIERED ROOF STRUCTURE, WITH A ROUND ON SQUARE BASED POINTED MINARET. THE MINARET HAS BEEN DEMOLISHED. ONLY THE OLD STRUCTURE OF THE MAIN PRAYER HALL REMAINS, WITH THE MOSQUE EXTENSIVELY RENOVATED.

Figure 4-94 Old photograph of Masjid Kebon Jeruk.

[65] Data taken from A. Heuken. S, (2003*) Mesjid-mesjid tua di Jakarta*, Jakarta: Yayasan Cipta Loka Caraka

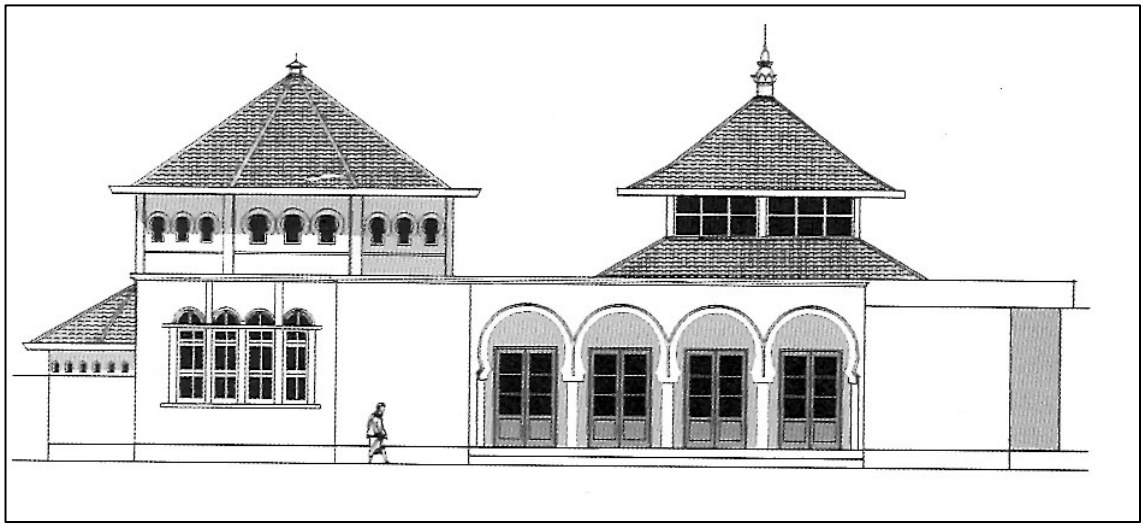


Figure 4-95 East elevation of Masjid Kebon Jeruk

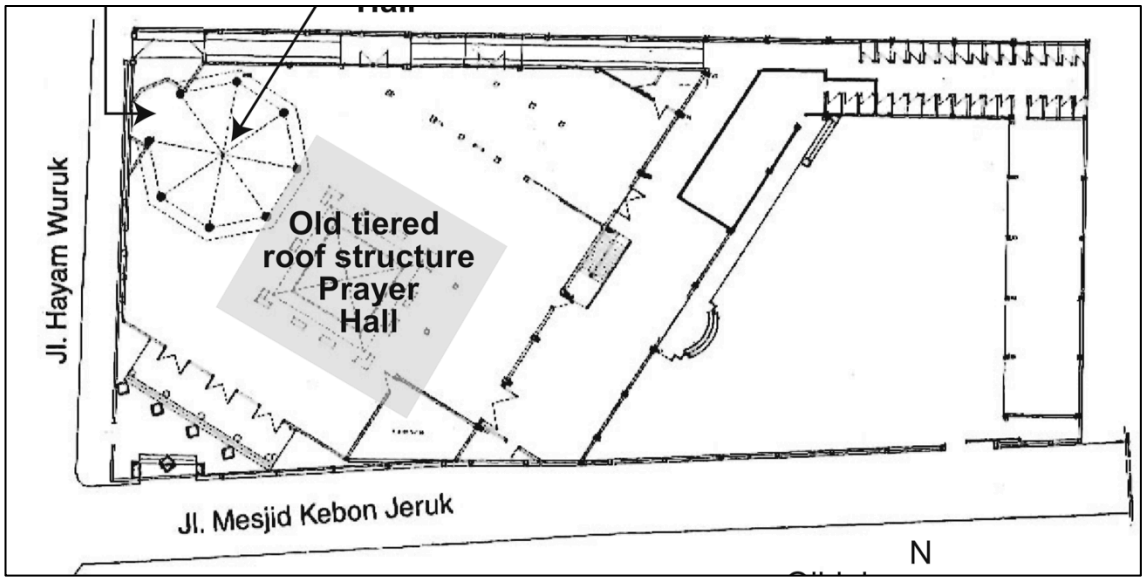


Figure 4-96 Floor plan of Masjid Kebon Jeruk

Masjid Kebon Jeruk (MKJ) is located at the corner of Jalan Hayam Wuruk – one of the main roads in Jakarta - and Jalan Mesjid Kebon Jeruk. It was originally built in 1786 on a piece of land belonging to a Chinese kapitan Tschoa, also known as Tamien Dossol Seng. MKJ is made up of the main prayer hall, a minaret which is incorporated into the main building and a small cemetery within its compound (Figures 4-94 to 4-96). It is strategically located at the junction of one of the main roads in Jakarta, close to the river Ciliwung (Figure 4-97). It is currently mainly used (and controlled) by the *Jamaah Tabligh* movement which limits public access to the use of this mosque.

Figure 4-97 Masjid Kebon Jeruk exterior view from the main road

The mosque has undergone extensive renovations over the years to the extent that the many original features were lost. The first renovation was done in 1950 which involved the extension of the mosque on all sides and building up a wall right on the boundary line of Jalan Hayam Wuruk. Subsequent upgrading and renovations were done in 1974, 1983-86 and 1998.

It originally had two tiered roof over a square plan prayer area of approximately 10 meter by 10 meter with a round minaret with conical top. Currently the two-tier roof structure was hidden in the middle part of the new extension. Some old graves still exist within the mosque compound. At present MKJ is a cement-rendered brick building painted white with aquamarine green trimmings around openings and selected features. From the roadside an octagonal shape roof dominated the building roof line with another dome structure covering a rounded wall in the western part of the building.

The tomb of 1792 which is found in the small cemetery of the mosque bears uniqueness of the *peranakan* group of people. The grave marker has Chinese characters with Arabic dates, naga heads and other Chinese ornaments as its decorations. It is the tomb of Fatima Hwu, the wife of Mr Tschoa who built this mosque in 1786.

4.3.2 MASJID AN-NAWIER, JAKARTA

Location:	Jalan Pekojan Raya, Jakarta Barat[66]
Date:	1760
Condition:	Extensively renovated and enlarged
Original Patron:	Sayyid 'Abdallah bin Husein Al-Aydrus, from Hadhramaut
Material:	Cement-rendered brickworks
Significance:	Historical: one of the earliest extant mosques in Jakarta, located in old Arabic settlement of Pekojan
Stylistic Influence:	Colonial-European

Table 4-13 Masjid An-Nawier background data

Figure 4-98 Entry towards Masjid An-Nawier

Masjid An-Nawier (MN) is located on Jalan Pekojan, very close to the river Angke in a village occupied by the Arab community. The mosque is a one storey building, set back from the Pekojan Road and has a relatively low building height. Its minaret is located behind the building, and is only visible from far. On street level,

[66] Data taken from A. Heuken. S, (2003*) Mesjid-mesjid tua di Jakarta*, Jakarta: Yayasan Cipta Loka Caraka

recognising the building as a mosque itself was a challenge if not for its unique parapet design (Figure 4-98 and 4-100).

MN was built in 1760 by Sayid Abdullah bin Husein Alaydrus from Hadhramaut although some authors attributed it to Komandan Dahlan, whom was said to be the one responsible for enlarging the mosque in 1850 from a size of 500 square meters to 1500 square meter. The mosque's original features were found in the square plan area where the *mihrab*, *mimbar* as well as access to the minaret are located (Figure 4-99 and 4-100).

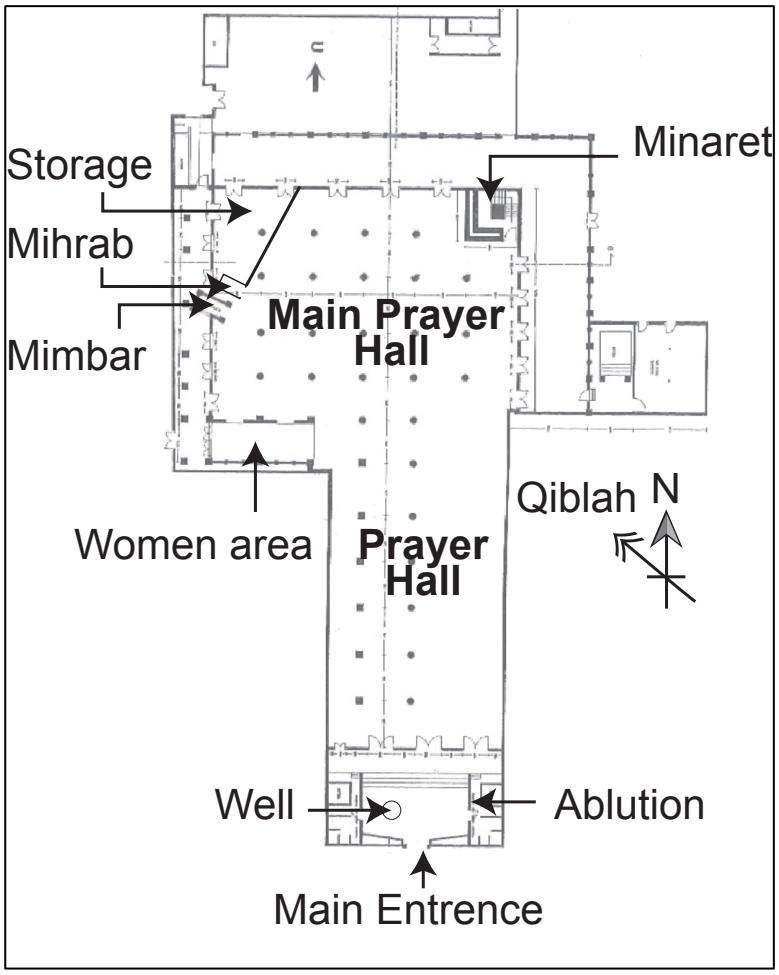


Figure 4-99 Floor plan of Masjid An-Nawier

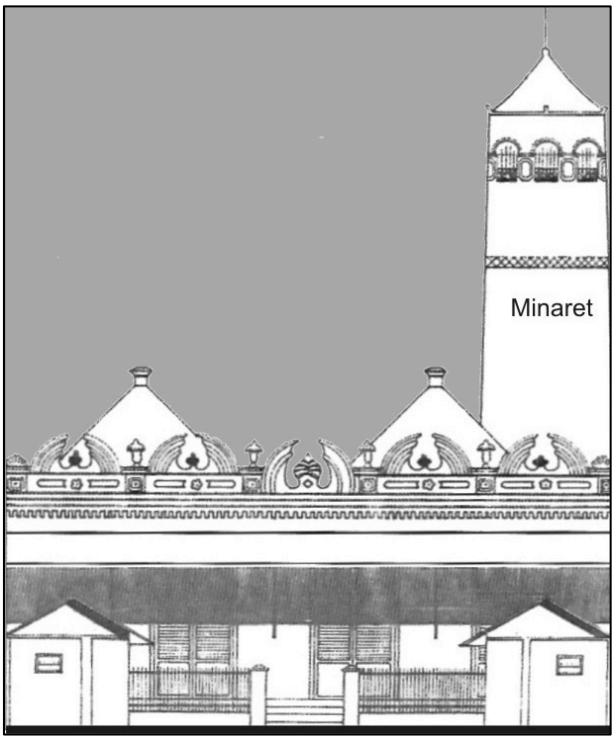


Figure 4-100 Elevation of the mosque showing the cylindrical minaret

Figure 4-101 Masjid An Nawier: *mihrab* and *mimbar*

Figure 4-102 The extended prayer hall

Figure 4-103 The outer wall of the *mihrab*
Protruding structure with pyramidal top and fan-like ornamentations

4.3.3 MASJID AL-MANSUR, JAKARTA

Location:	Jalan Sawah Lio II/33, Jakarta Barat[67]
Date:	1717
Condition:	Extensively renovated and enlarged
Original Patron:	'Abdul Mohith from Mataram
Material:	Cement-rendered brickworks
Significance:	Historical: first mosque to be built in the 18th century Batavia during Dutch rule
Stylistic Influence:	Regional vernacular / Colonial-European

Table 4-14 Masjid Al-Mansur background data

Figure 4-104 Masjid Al-Mansur, Jakarta

[67] Data from A. Heuken. S, (2003*)* and Masjid 2000, photographs by the author

Masjid Al-Mansur (MMJ) was the first mosque built in Jakarta in the 18th century. It is located at Jalan Sawah Lio II/33, in the district of Tambora, West Jakarta. It was built by a Temenggung from Mataram although the name Mansur was sometimes attributed to Kiyai Haji Mohamad Mansur – then the *imam* of the mosque - who waved the Indonesian red and white flag from the minaret top in 1947. MM was said to be used as an operation centre in the fight against the Dutch colonialism between 1945 and 1949 (Masjid 2000).

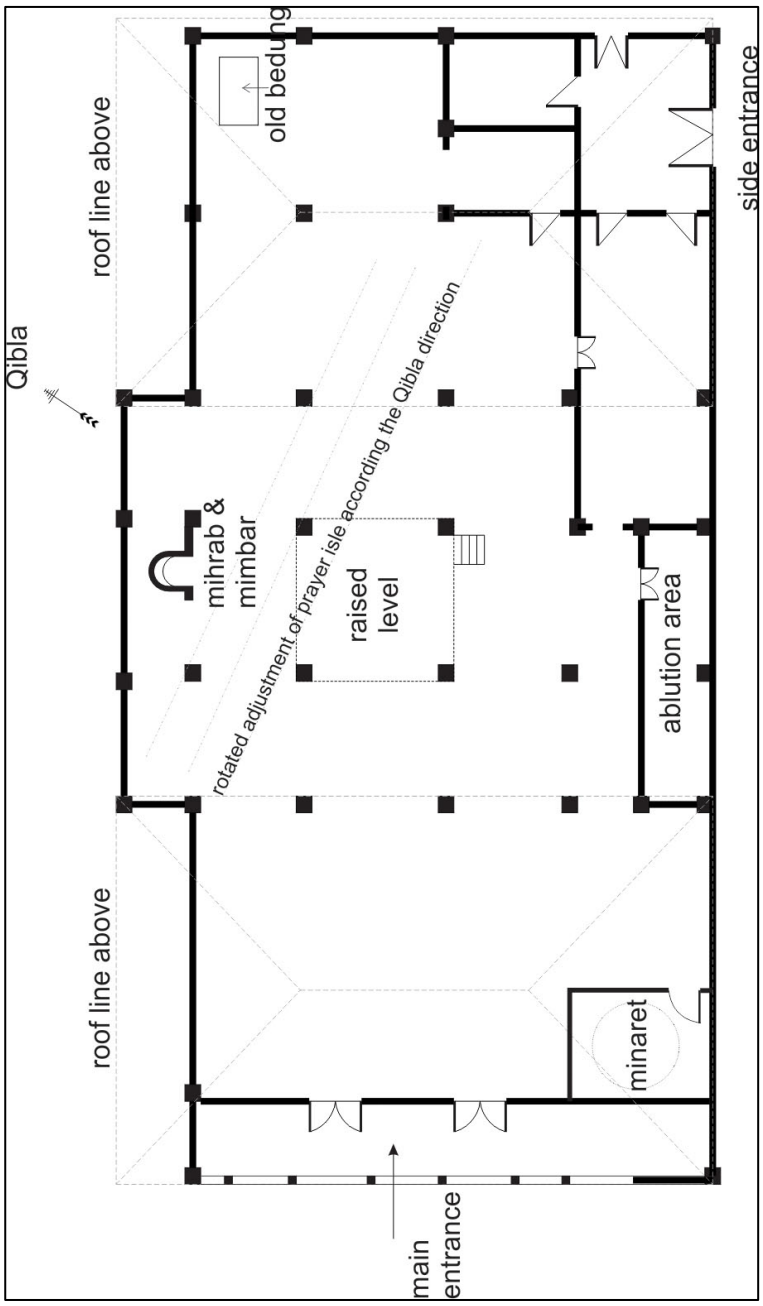


Figure 4-105 Floor plan of Masjid Al-Mansur

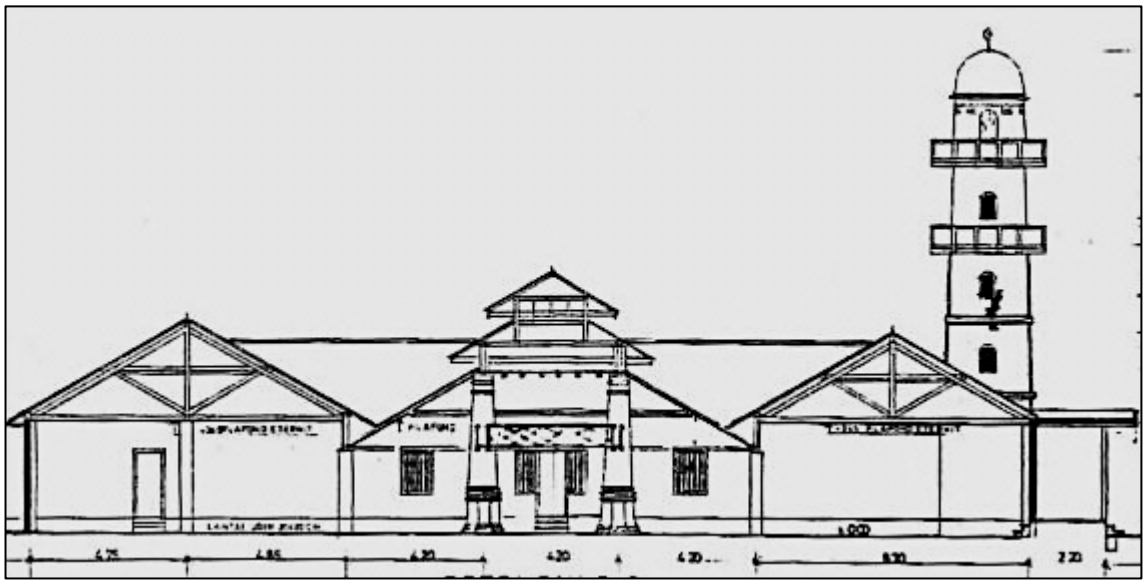


Figure 4-106 Cross-section of the mosque showing original central portion

MMJ has a three-tier pyramidal roof supported by four massive columns. It originally had a square plan prayer hall with the minaret located south-eastern of the hall (Figures 4-105 and 4-106). Due to the extensions carried out on the mosque, the original part of the mosque which measures 12 meter by 14.40 meter has currently become the heart of the mosque with the minaret accessible from the interior of the new extension (Figure 4-106). This old part is marked by four massive round columns with octagonal base supporting the roof. From inside the mosque, the upper roof tiers were not visible as the ceiling lining was made flat beginning of the second tier-roof (Figure 4-107).

Figure 4-107 Four massive columns located in the main prayer hall

The four columns were connected to each other by parallel wooden beams forming veranda like structure with criss-cross pattern infill in each panel. From afar, it looked like a *dikka*[68] however the middle part in between the beams and columns was left hollow. Two sets of stairs provided access to platform created at the top of the second roof level; one from the floor level to the first level, and the second stairs led to the upper level (Figure 4-108).

[68] A platform inside a mosque's prayer hall which is usually used as a platform which is used by the mosque's appointed official to read the *Qurán*.

Figure 4-108 Stairs leading to the *dikka*-like structure

MMJ utilised the whole of its site for the prayer hall and associated facilities. The main entrance was located at the south where a narrow veranda served as the entrance porch. From inside the mosque, the old part was still visible as its boundaries were made visible by the retention of the old structures. MMJ has a cylindrical minaret with a dome top. It was placed to the south-east of the main prayer hall. The ablution area was attached to the main hall and it was accessible through the doors located on the eastern wall. To the west, behind the *qibla* wall, was a small necropolis where a few graves were buried under a *cungkup* (Figure 4-109).

Figure 4-109 Small necropolis in the western compound of Masjid Al-Mansur

4.3.4 MASJID KAMPUNG BARU, JAKARTA

Location:	Bandengan Selatan, Jakarta Barat[69]
Date:	1743-8
Condition:	Poorly maintained
Original Patron:	Believed to be built by the Arab community
Material:	Cement-rendered brickworks
Significance:	Historical: the area was a 17th century settlement for Arab community from Hadhramaut.
Stylistic Influence:	Regional vernacular

Table 4-15 Masjid Kampung Baru background data

Figure 4-110 Masjid Kampung Baru, Jakarta

Masjid Kampung Baru (MKB) is located at Jalan Bandengan Selatan, in the district of Pekojan near the Angke River. This place was the settlements for people from India in the 17th and 18th century; and in the 19th century was populated with the Arabs that came from Hadhramaut, Yemen. MKB was said to be built by the Muslims from Malabar (Masjid 2000) between 1744 and 1748.

[69] Data from A. Heuken. S, (2003*)* and Masjid 2000

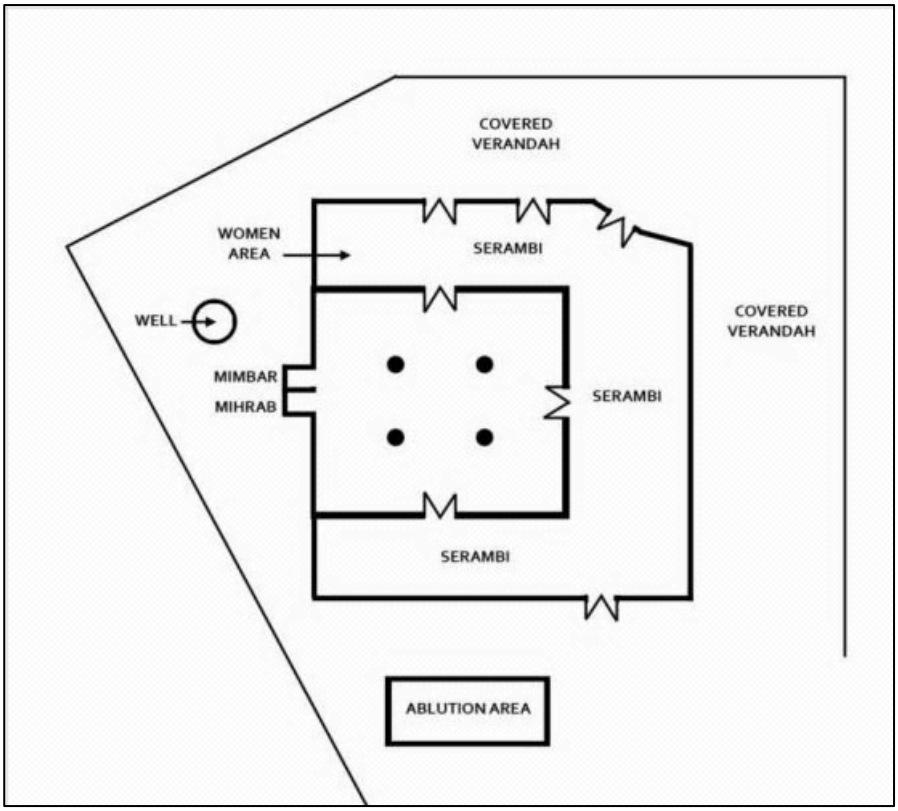


Figure 4-111 Floor plan of Masjid Kampung Baru.

MKB has a two tier pyramidal roof which covered originally a square plan prayer space. It has been extended over the years with additional *serambis* adjoining the prayer hall to the north, east and south. Its main entrance is located in the northern *serambi*, through the veranda. An old well was found in its compound, behind the *qibla* wall. A separate ablution building was located to the south (Figure 4-111). The mosque has no minaret.

Figure 4-112 The outer wall of the *mihrab*

Figure 4-113 *Qibla* wall of Masjid Kampung Baru

Figure 4-114 Interior lining of the mosque's roof structure

This two tiered roof mosque has been extensively renovated to the extent only the central part with the four main columns were the original features of the mosque (Figures 4-113 and 4-114). Its original beautifully carved wooden *mimbar* is currently placed in the Historical Museum Jakarta (Museum Sejarah Jakarta) (Masjid 2000). The front façade of the mosque is covered with white tiles. The front wall is raised to form a parapet decorated with half round panels painted in light green. There are two doors and five windows in the front façade; all of the openings have arched shape fanlights above them with wood turn bars decoration (Figure 4-115).

Figure 4-115 The front façade of Masjid Kampung Baru

4.3.5 MASJID AT-TAQWA, NUSA TENGGARA

Location:	Lerabaeng, Alor[70]
Date:	c. 17th century
Condition:	unknown-
Original Patron:	Raja Kinangi Atamalan (r. 1619-38)
Material:	Cement-rendered brickworks
Significance:	Historical: built during the rule of Raja Kinangi Atamalan with the help of Sultan Gimales Gogo from Maluku
Stylistic Influence:	Regional vernacular

Table 4-16 Masjid At-Taqwa background data

Figure 4-116 Masjid At-Taqwa

Masjid at Taqwa Lerabaeng (MTN) is located in the village of Wakopsir, in the district of Alor Barat Daya within the province of East Nusa Tenggara. It was built

[70] Main information from the book '*Masjid Kuno Indonesia'* (1999), published by Direktorat Perlindungan dan Pembinaan Peninggalan Sejarah dan Purbakala, Indonesia.

during the rule of Raja Kinanggi Atamalai, the fifth king of Kui (r. 1619 – 1638) with the help of Sultan Gimales Gogo from Maluku. The mosque was built beginning of 1632 after Sultan Gimales Gogo successfully converted Raja Kinanggi Atamalai to become a Muslim in 1625. Both Sultan and Raja became the patrons in Islamic propagation among the people under the Kui rule. Their tombs were found in the compound of the mosque.

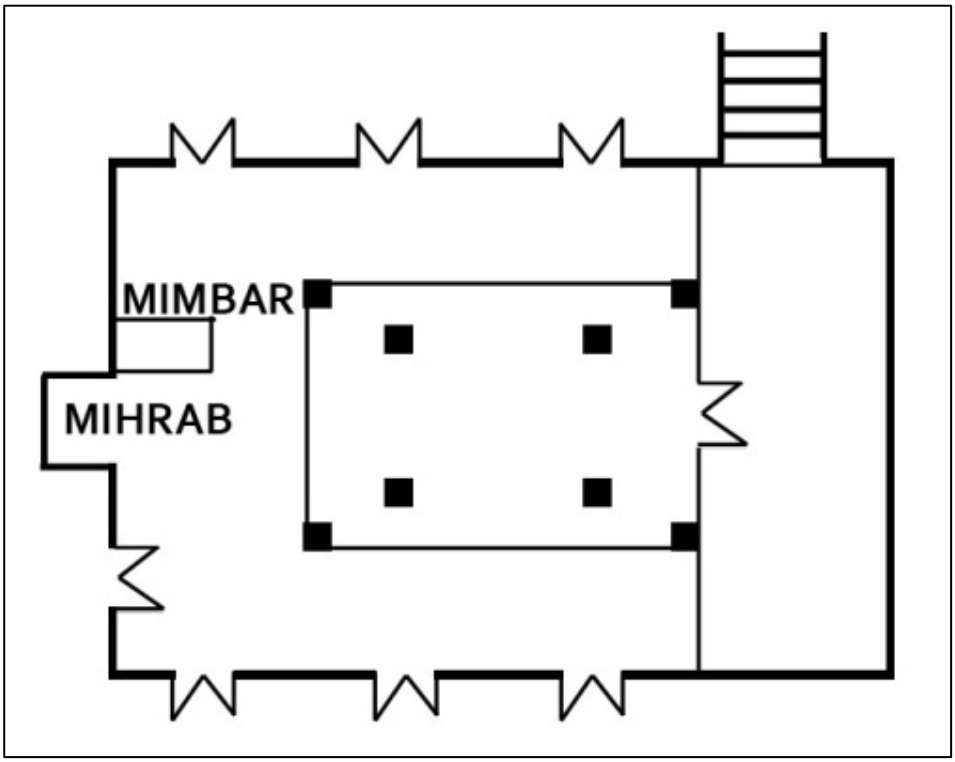


Figure 4-117 Floor plan of Masjid At-Taqwa
drawn based on descriptions retrieved from archaeological data

Despite the fact that it is significant due to its age, very little information pertaining to this mosque is available. The mosque is built on a hill top close to Selat Ombay (Straits of Ombay); to its west is the village's agricultural area and to its east is the river Erbah. Its main entrance is from the north where a stairs with six steps leads to the mosque's veranda which is lower than the prayer hall's floor level. The mosque does not have a minaret. In its compound, to the left of the mosque's entrance were two tombs belonging to Raja Tarsano Kinanggi and his wife; while to the right were the tomb of Sultan Gimales Gago and his wife.

MTN is a wooden mosque built on stilts. It is raised almost 1.7 meter above the ground, employing post and beams construction. It has a rectangular floor plan

measuring approximately 7.9 meter by 9.8 meter with 16 columns supporting the two tier roof structure (Figure 4-117). All the structural elements were joined using ropes made from rattan, without any nails. The walls are made of bamboo and palm bark which serve as wall columns with interwoven nypa leaves as wall panels. Its floor is covered with bamboo strips fixed to a cement floor. Renovation works were carried out by the Directorate of Preservation beginning of 1998. It is unclear, how much have changed and what remains of the mosque's original feature. Its roof covering – in 1998 – was metal sheeting painted in red; no records were found as to what was the original material for the roof.

4.3.6 MASJID PALOPO, SULAWESI

Location:	Luwu, Sulawesi Selatan[71]
Date:	1604
Condition:	well maintained
Original Patron:	Datuk Sulaiman from Minangkabau, Sumatera Barat
Material:	Timber structure with mountain rock (*batu cadas*) brickwork
Significance:	Historical: Datuk Sulaiman arrived in Sulawesi in the year 1603, successfully converted Raja Luwu to become a Muslim, and thereafter built this mosque
Stylistic Influence:	Regional vernacular

Table 4-17 Masjid Tua Palopo background data

SOURCE: (COMMONS.WIKIMEDIA.ORG/WIKI/FILE:MASJID_TUA_PALOPO.JPG)

Figure 4-118 Masjid Tua Palopo exterior front view

Masjid Tua Palopo (MTP) is located in Kota Palopo, Kecamatan Ware, Kabupaten Luwu in South Sulawesi. It was designed and built around the year 1604 A.D. by Puang Ambe Monte, who came from Sangalla Tana Toraja; under the patronage of an ulema from Sumatera Barat known as Datuk Sulaiman or Datuk

[71] Information from Ministry of Religious Affairs Indonesia http//kemenag.go.id and Main information from the book '*Masjid Kuno Indonesia'* (1999), published by Direktorat Perlindungan dan Pembinaan Peninggalan Sejarah dan Purbakala, Indonesia.

Pattimang. He was one of three Muslim missions that arrived in Bua Luwu in 1603 from Minangkabau and successfully converted the ruler of Luwu to become a Muslim. Islamic propagation reached its peak under the ruling of Sultan Abdullah Matinroe who replaced his father in 1604. Under his rule, the capital of Luwu Kingdom (*Kerajaan Luwu*) was changed from Patimang to Ware Palopo. It was here that the mosque was built in 1604; and served as the Sultanate mosque.

SOURCE: (JEJAKMIHRABMIMBAR.WORDPRESS.FILE.COM)

Figure 4-119 Masjid Tua Palopo main prayer hall exterior roof view.

MTP is built at the intersection of two main roads, not far from the Sultanate palace (Istana Raja Luwu) and to the west of the *alun-alun*. The mosque is orientated east-west; with the main entrance facing east. MTP has a square plan measuring approximately 15 meter by 15 meter with a three tiered pyramidal roof – similar to the Masjid Agung Demak. The roof structure is supported by four main columns which are connected to the roof beams of the second tier; while the highest tier is supported by a single pillar (*soko tunggal*) (Figure 4-120). This pillar is made from local wood (*cinna gori*) with a diameter of 90 centimetres. The roof covering is made from wood shake. The total height of the mosque from the ground is nearly 11meter.

SOURCE: (JEJAKMIHRABMIMBAR.WORDPRESS.FILE.COM)

Figure 4-120 Masjid Tua Palopo: view of the *soko tunggal* (single column)

Both the north and south elevations have two windows each, while the western wall – which is the *qibla* wall – has a protruding external feature which formed the niche of the *mihrab* inside (Figure 4-121). The main entrance of the mosque has an arch top opening with a moulding curved at the ends with vegetal motif and made the door look like a winged door. Above the door is *Quranic* calligraphy (Figure 4-122).

SOURCE: (BUJANGMASJID.BLOGSPOT.COM)

Figure 4-121 Masjid Tua Palopo main prayer hall during congregation prayer

SOURCE: (SAVEOURMIND.WORDPESS.COM)

Figure 4-122 Main entance to the prayer hall

4.3.7 MASJID TELUK MANOK, PATANI, SOUTH THAILAND

Location:	Patani[72]
Date:	17-18th century
Condition:	Well maintained
Original Patron:	Wan Hussein al-Senawi or Sayyid Hussein al-Idrus
Material:	Cement-rendered brickworks
Significance:	Historical: Patani was an Islamic Sultanate in 1516-1902[73] Architectural: Wooden architecture in Malay longhouse prototype
Stylistic Influence:	Regional vernacular

Table 4-18 Masjid Teluk Manok background data

Figure 4-123 Masjid Teluk Manok exterior view

[72] Information from KALAM, Universiti Teknologi Malaysia

[73] Information from Ibrahim Syukri (2005), *History of the Malay Kingdom of Patani,* Chiang Mai: Silkworm.

Masjid Teluk Manok (MTM) is located in the village of Teluk Manok in Lubok Sawa within the district of Bachok, Narathiwat, a region south of Thailand. It is also known as Masjid Wadi al-Hussain; after the name of its founder, Wan Hussain as-Senawi ,who was responsible for building it after being instructed by Raja Selindung Bayu who ruled Kota Jerengga.[74] Its builders were Muhammad and Abdul Rauf who lived locally and were well-known carvers during that time.

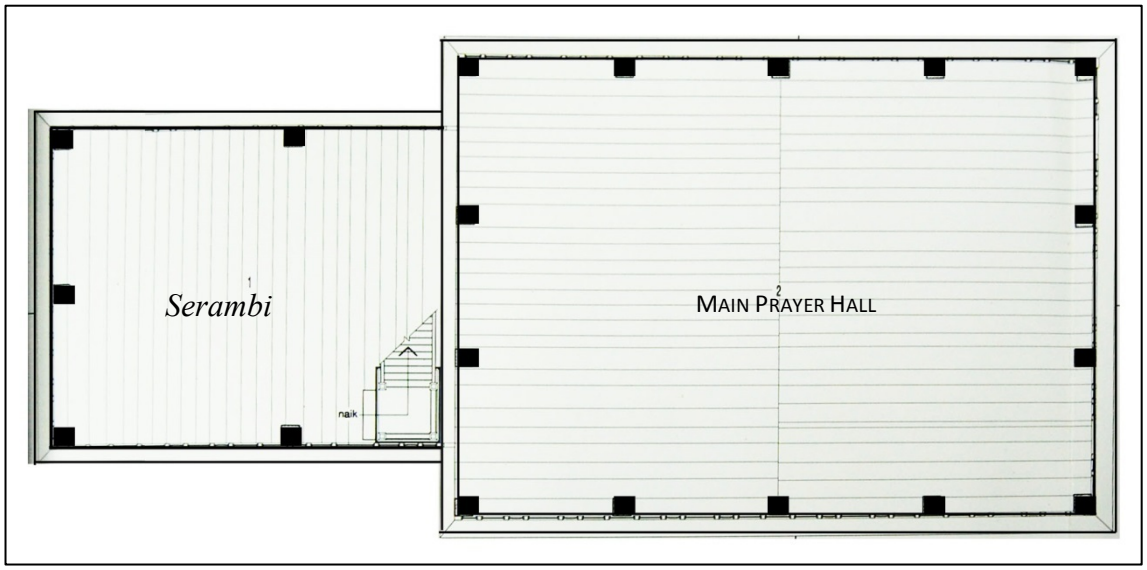


Figure 4-124 Masjid Teluk Manok floor plan drawing of the original building (without extensions)

MTM has become a distinguished community centre over the years due to people's affinity towards it. It has been extended many times. Currently the prayer hall has been extended to the east to incorporate new structure attached to the original prayer hall (Figure 4-124). To its south a primary school was built with open air reading areas. A small stream runs to its south; and the mosque is surrounded by the villagers' houses.

[74] Teluk Manok as the Malays in Malaysia refers to. Colloquially the village is also known as *Talomanoh* or *Talok Manok*. As for the name of the mosque, it is both known as Masjid Teluk Manok or Talomanoh – taking after the name of the village – as well as Masjid Wadi al-Hussein or Hussain or Vadialhussein in reference to its patron the pronounced *ulema* Wan Hussein As-Sanawi

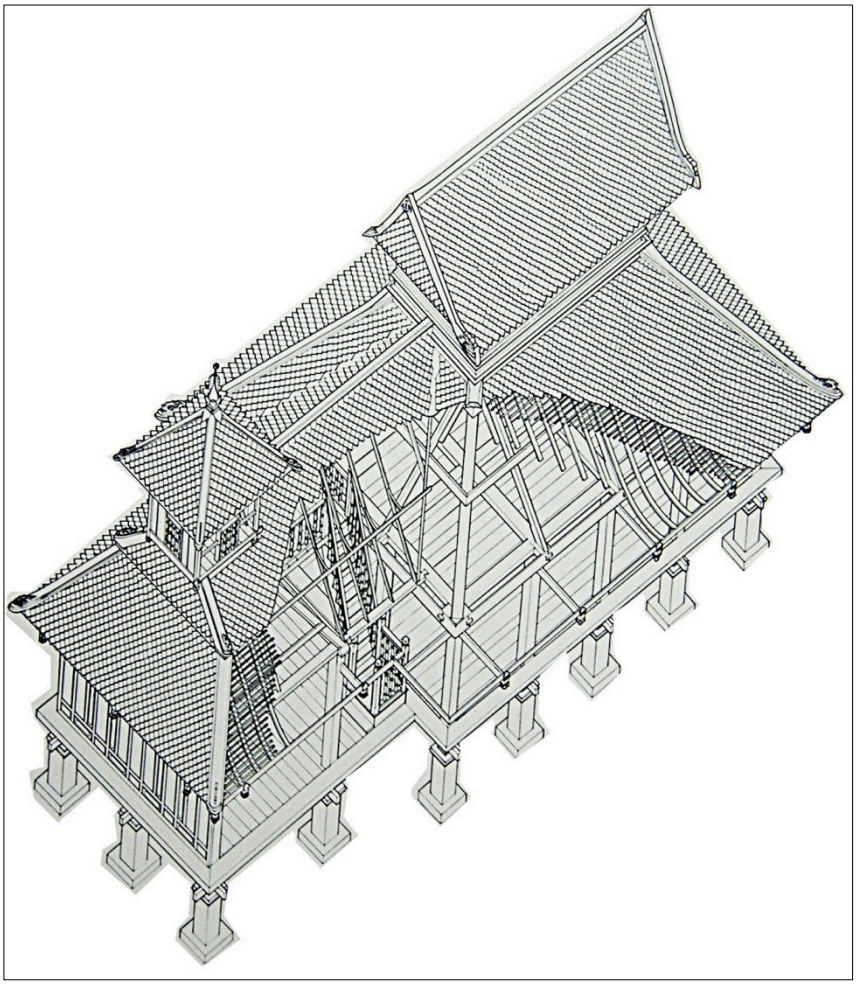


Figure 4-125 Axonometric drawing of Masjid Teluk Manok timber structure

MTM is a timber mosque which was originally built on stilts with layered hip roofs, employing the architecture of traditional houses of the Malays. As the stilts decay, they were replaced with brick piers on concrete base at the foundation level in 1935. Its original roof material which was *sago* leaves was replaced with *singora* tiles[75] in 1834 (Figure 4-125).

In 1935 availability of new building materials and techniques brought about significant changes to the timber mosque. Brick piers with concrete base replaced the mosque's dilapidated timber stilts at the ground level. In the same year, a minaret was added to the roof structure and the open veranda was covered and became the extension of the prayer hall. The mosque has been extended over the years and currently has an

[75] Fired red clay tiles; usually manufactured locally.

entrance porch with pointed arches with concrete stairs. Nevertheless, many of its original features were retained.

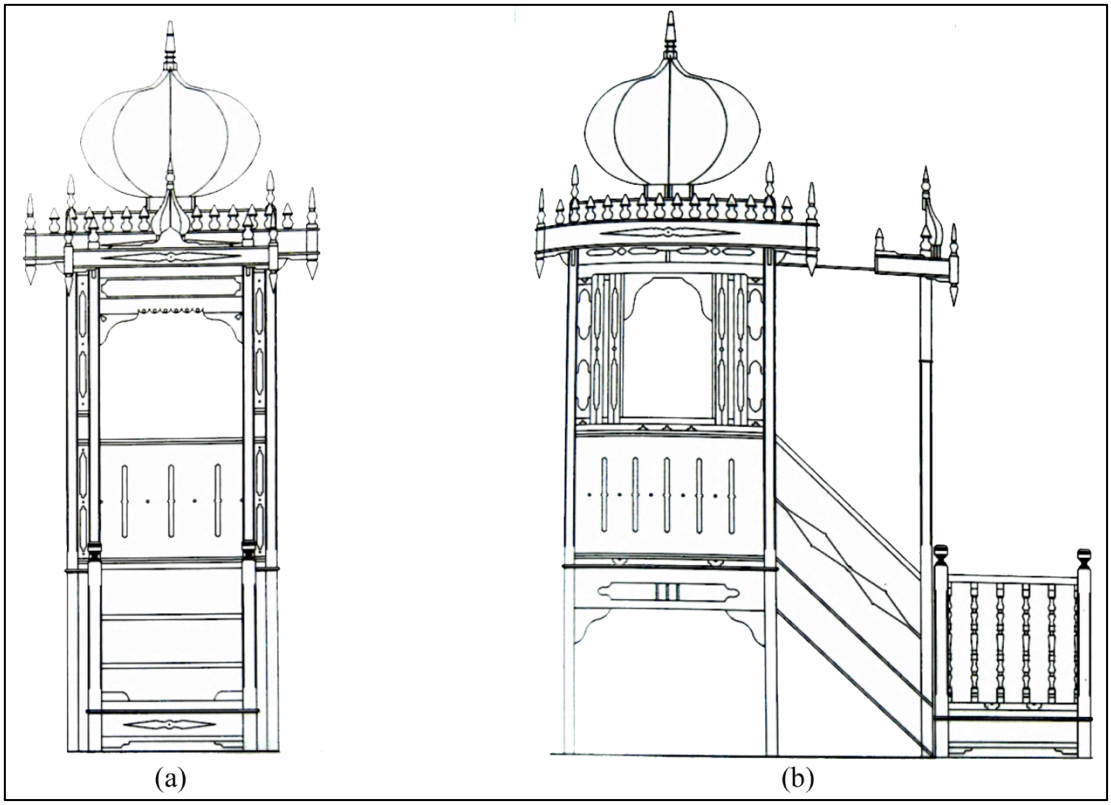


Figure 4-126 Masjid Teluk Manok *mimbar* drawings, (a) front elevation and (b) side elevation

The mosque displays the traditional craftsmanship in its jointing system which does not use any nails at all. Instead a kind of tongue and groove technique is applied whereby constructional elements were carved out at the joints to interlock with one another perfectly. The incorporation of the minaret into the roof structure without disrupting the proportion or the architectural language displays the ingenuity of local builders. A cemetery is located to the south of the mosque, across the creek.

4.3.8 MASJID TENGKERA, MELAKA

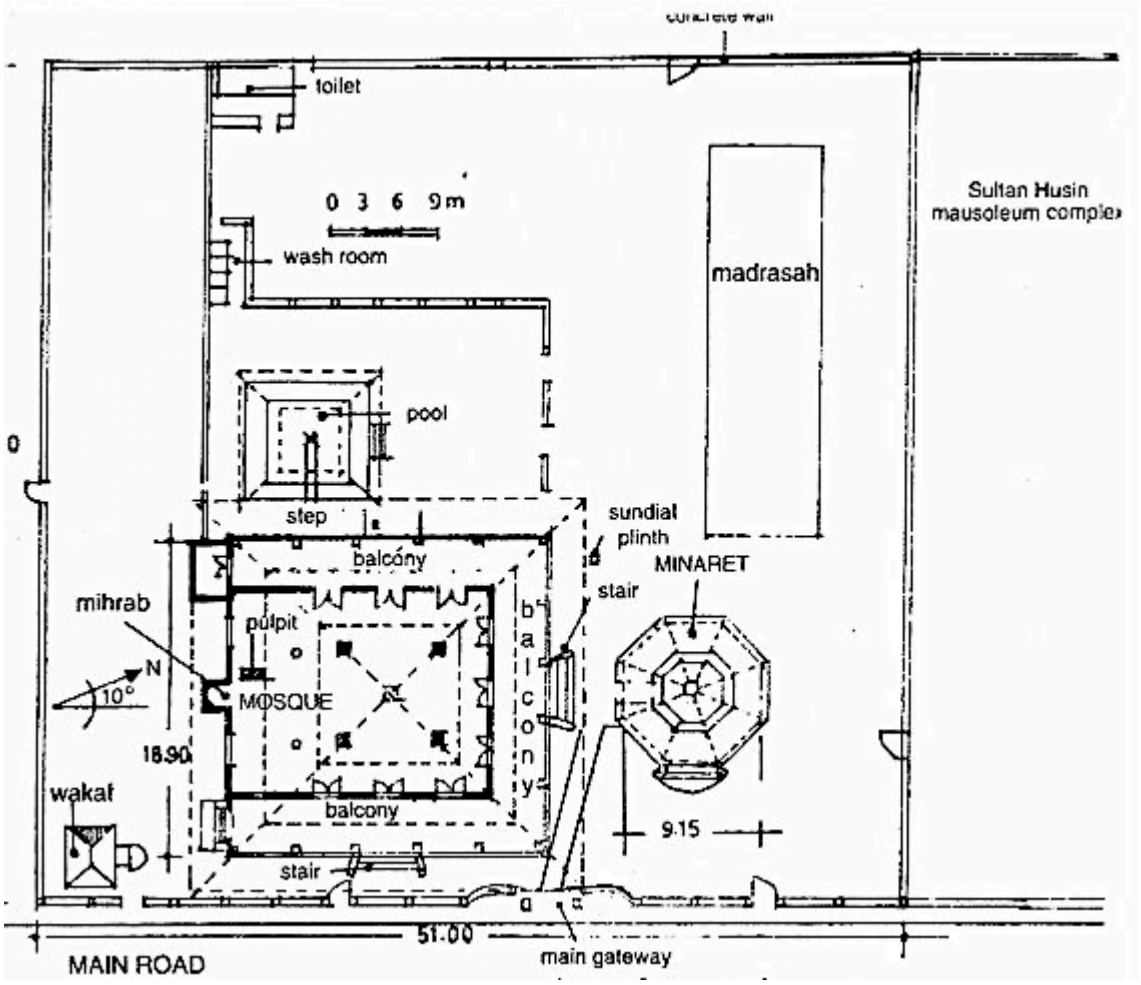
Location:	Melaka[76]
Date:	1728/ 1780
Condition:	Well maintained
Original Patron:	Unknown, built during the Dutch rule of Melaka
Material:	Cement-rendered brickworks with timber structural frame
Significance:	Historical: one of the oldest surviving mosque in Malay Peninsula Architectural: three tiered pyramidal roof form
Stylistic Influence:	Regional vernacular

Table 4-19 Masjid Tengkera background data

Figure 4-127 Masjid Tengkera exterior view

[76] Main information from (Abdul Halim, 2004) and (Tajuddin Rasdi & Alice Sabrina 2003)

Masjid Tengkera (MT) is located at Jalan Tengkera in the town of Melaka. It was built in 1780 – based on an inscription written on the mosque's entrance gateway – replacing the original mosque (Surau Tengkera) which was built in 1728. Currently only the minaret of the original mosque survived on the original site, the whole mosque was ruined and has been destroyed. The current mosque was used as Melaka principal mosque before the State Mosque was built in Bukit Pala.



SOURCE: (ABDUL HALIM, 1996)

Figure 4-128 Masjid Tengkera site plan

The mosque is located on a flat site not far from the river of Melaka. At present it is surrounded by shop lots in a busy part of Melaka old town. From the road side, the mosque's minaret is its outstanding feature with an octagonal base and a height of almost 17 meter high. The main gateway is located on the southern side and it leads towards the mosque's entrance *serambi* on the east. The minaret, the prayer hall's main door and the *mihrab* forms a clear axis towards the *qibla.* To the north of the main prayer hall is the ablution area, where a big pool is located. To its east is a *madrasah*.

Sultan Husin Shah Mausoleum complex is located to the east of the mosque (Figure 4-128). Here lies the tomb of Sultan Husin Shah, the Sultan of Johor who signed an agreement in 1819 in which Singapore was handed over to the East Indies British Company.

PHOTO CREDIT: FAROUK YAHYA

Figure 4-129 Masjid Tengkera *serambi* view.

PHOTO CREDIT: FAROUK YAHYA

Figure 4-130 Masjid Tengkera main prayer hall interior view.

MT is built with cement-rendered brick walls supporting a three-tier pyramidal roof form. It has a rectangular plan with four square columns supporting the uppermost roof structure and smaller round columns supporting the lower roof levels. The wall façade is decorated with glazed ceramic tiles. Various colours are applied in the wall tiles and the interiors of the mosque making it aesthetically pleasing (Figure 4-130). It is

in good condition and has been gazetted under the Malaysian Antiquity Act 1976 as being a heritage building.

Its three tiered pyramidal roof structure covers a square floor plan consisting of the main prayer hall and the surrounding verandas (*serambi*). Its architecture displays a strong Chinese influence especially seen in the minaret that looks like a pagoda, the ceramic tiles used and the design of the *mimbar*. Due to absence of any archaeological records, it is difficult to tell the dates of renovations or to trace which part of the mosque was original. The plan drawing of the mosque however reveals that the original *qibla* wall was probably removed and the prayer hall extended to include the western *serambi;* changing the prayer hall which was originally square to rectangle.

A cemetery is located to the east of the mosque, separated from the mosque compound with a fence. It contains old graves; however it is difficult to ascertain the dates as all the grave markers have been painted white (Figures 4-131).

PHOTO CREDIT: FAROUK YAHYA

Figure 4-131 A cemetery is located to the east of the mosque - separated from the mosque compound with a fence.

4.3.9 MASJID KAMPUNG HULU, MELAKA

Location:	Melaka[77]
Date:	1728
Condition:	Well maintained
Original Patron:	Dato' Shamsuddin bin Arom, *Kapitan* for the Malay community during Dutch rule of Melaka
Material:	Cement-rendered brickworks with timber structural frame
Significance:	Historical: one of the oldest surviving mosque in Malay Peninsula Architectural: three tiered pyramidal roof form
Stylistic Influence:	Regional vernacular

Table 4-20 Masjid Kampung Hulu background data

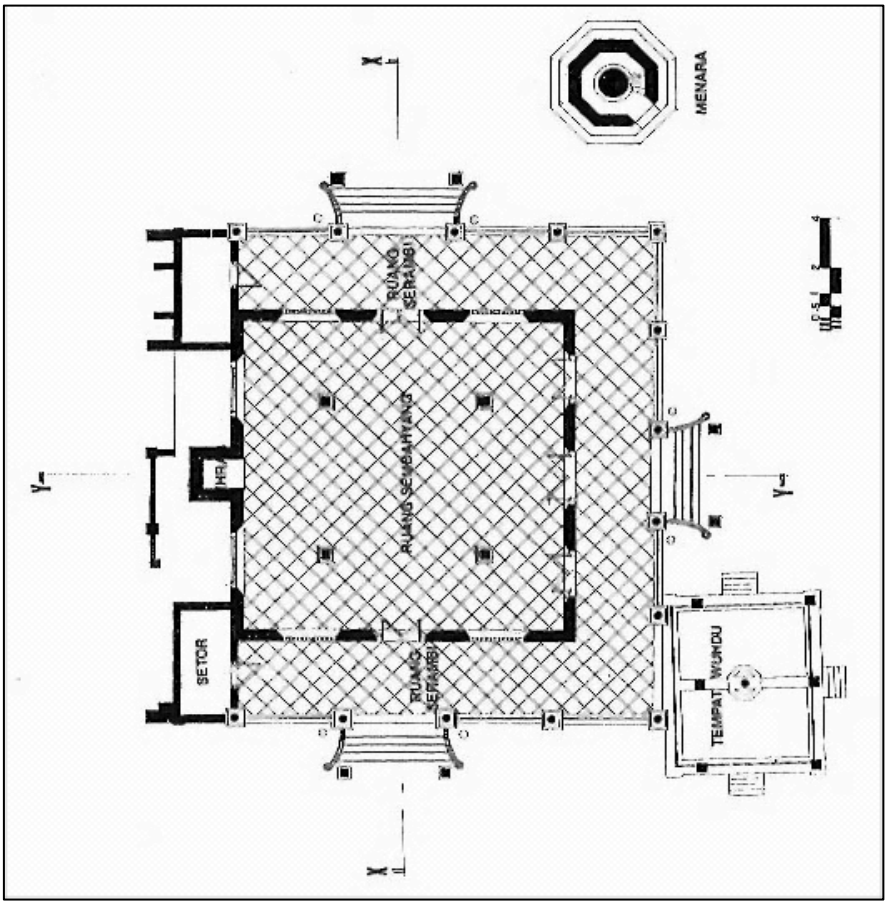
SOURCE: (ABDUL HALIM, 2004)

Figure 4-132 Masjid Kampung Hulu exterior view.

[77] Main information from (Abdul Halim, 2004) and (Tajuddin Rasdi & Alice Sabrina 2003)

Masjid Kampung Hulu (MKH) was built in 1728 by Datuk Shamsuddin of Chinese descent. He is said to be the son of Datuk Harun, a Chinese man who was shipwrecked near the coast of Melaka and was cared by a Malay muezzin. He later married the muezzin's daughter and was appointed by the Dutch to become the Kapitan (Captain) of the Malays (Rasdi u.d.). The mosque's construction was funded by the VOC.

The original building was made of timber; however in 1892 the timber walls were replaced by Wazir Al-Sheikh Omar Husain Al-Attas with cement rendered brick walls. MKH currently sits on a piece of land in the older part of Melaka close to shops and not too far from Sungai Melaka. A tomb of Sayyid Abdullah al-Haddad, a renowned religious teacher is found in the mosque's cemetery. He is considered by the locals as a *waliyyuLlah.* The mosque also receives Chinese visitors who come to the mosque to pay tribute to its original patron.



SOURCE: KALAM

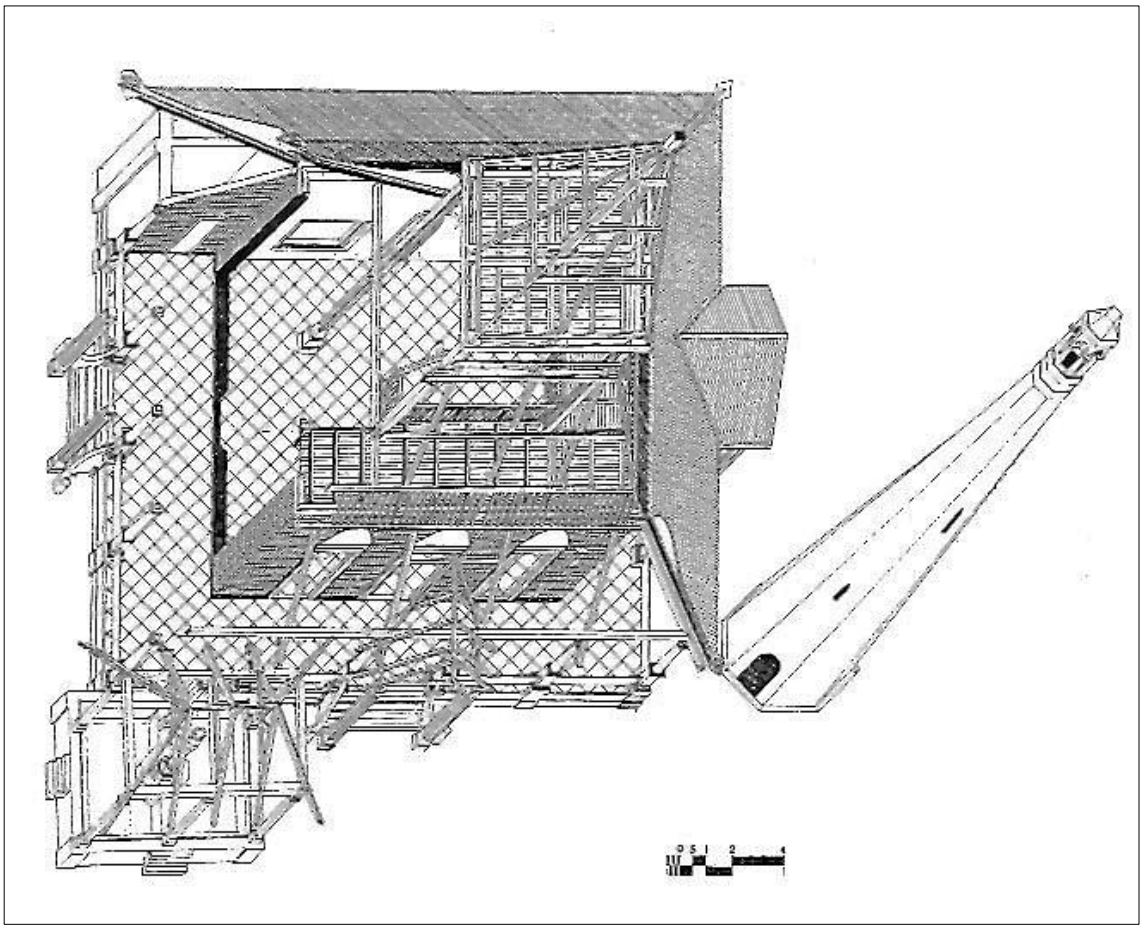
Figure 4-133 Masjid Kampung Hulu floor plan

PHOTO CREDIT: FAROUK YAHYA

Figure 4-134 Main entrence to Masjid Kampung Hulu.

MKH currently sits on a constricted site by a main road surrounded by shop lots. It is fenced off from the street by white brick walls of approximately 2 meter high. The site is basically made up of the gateway building which serves both as an entrance portico as well as a platform for the *beduk* (Figure 4-13); the main prayer building,

ablution pool and minaret. Although in reality the mosque's built-up area is small with the prayer hall's size to be approximately 11meter by 11 meter, the roof's steep angle has given the mosque its vertical volume. From the street level, its pagoda-shaped roof form and minaret dominate the skyline (Figure 4-135).



SOURCE: KALAM

Figure 4-135 Axonometric drawing of Masjid Kampung Hulu architectural structure.

MKH has a three tiered pyramidal roof supported by four central wooden columns with loadbearing brick walls. Its square plan main prayer hall and surrounding *serambi* make up its prayer space. It was originally built in timber employing post and beam construction, but currently only the central columns remained to be wood while the walls have been replaced with cement-rendered brick walls.

The minaret is detached from the main building and is located to the south-east of the prayer hall (Figure 4-135). It has an octagonal base plan and the diameter decreased as it gets higher. Made from cement-rendered bricks with white paint finished, its top is pointed and the upper most level has surrounding arched top

openings. The ablution pool is located to the south- south-west of the prayer hall. It is a rectangular pool with the approximate dimensions of 6 meter by 5 meters. *Gayungs* are utilised to take water from the pool in order to wash body parts (Figure 4-136).

PHOTO CREDIT: FAROUK YAHYA

Figure 4-136 Ablution pool of Masjid Kampung Hulu.

The main entrance to the mosque is provided by the gatehouse which is located in the east. The gatehouse, the stairs, main door and the *mihrab* form a clear *qibla* axis. The cemetery is located in the western compound of the mosque (Figure 4-137). It consists of old graves, with all the grave markers painted white; concealing the original design and inscription of the grave markers. Among the graves, one was raised above the ground and fenced. This grave probably belongs to the Sayyid Abdullah al-Haddad who is considered a *waliyyuLlah* (saint).

PHOTO CREDIT: FAROUK YAHYA

Figure 4-137 The cemetery is located in the western compound of the mosque.

4.3.10 MASJID KAMPUNG LAUT, KELANTAN

Location:	Original: Kampung Laut, relocated to Nilam Puri in 1967[78]
Date:	1730's
Condition:	Well maintained
Original Patron:	Unknown
Material:	Timber structure and wall paneling, timber shakes for roof covering
Significance:	Historical: Learning centre during the rule of Sultan Muhammad II to Sultan Muhammad IV Architectural: wooden architecture with three tiered pyramidal roof form
Stylistic Influence:	Regional vernacular

Figure 4-138 Masjid Kampung Laut background data

Figure 4-139 Masjid Kampung Laut exterior view after relocation of the mosque in Nilam Puri, Kelantan

[78] Main source of information, *Masjid Kampung Laut* (Salleh, 2003)

Masjid Kampung Laut (MKL) is a wooden building which was originally built with four main posts and three-tiered pyramidal roof. It is believed to be the oldest mosque in Malaysia although the exact date of construction is not established. According to oral tradition, the mosque was built by a group of *ulema* who stopped by at Kampung Laut on their way to Champa at the end of the 16th century (or early 17th century) and built this mosque which is said to have been based on the Masjid Demak model.

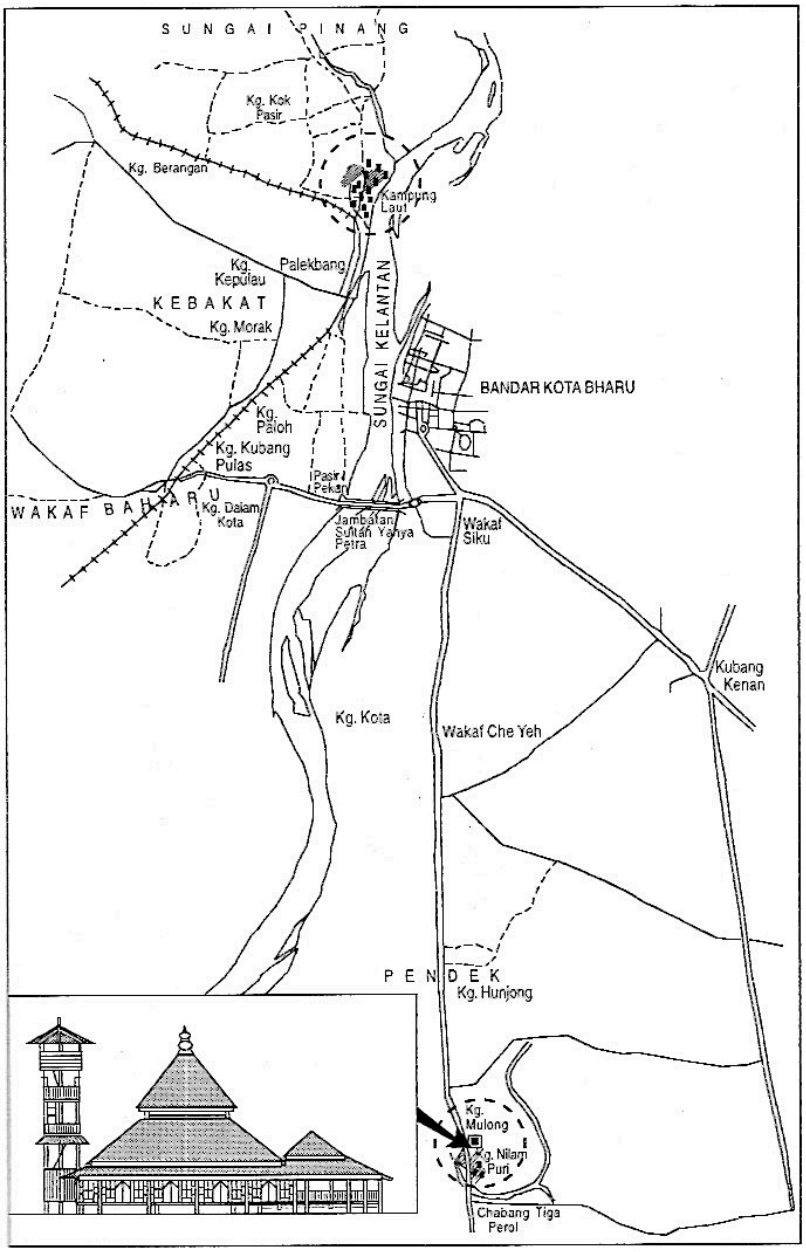


Figure 4-140 Masjid Kampung Laut relocation plan

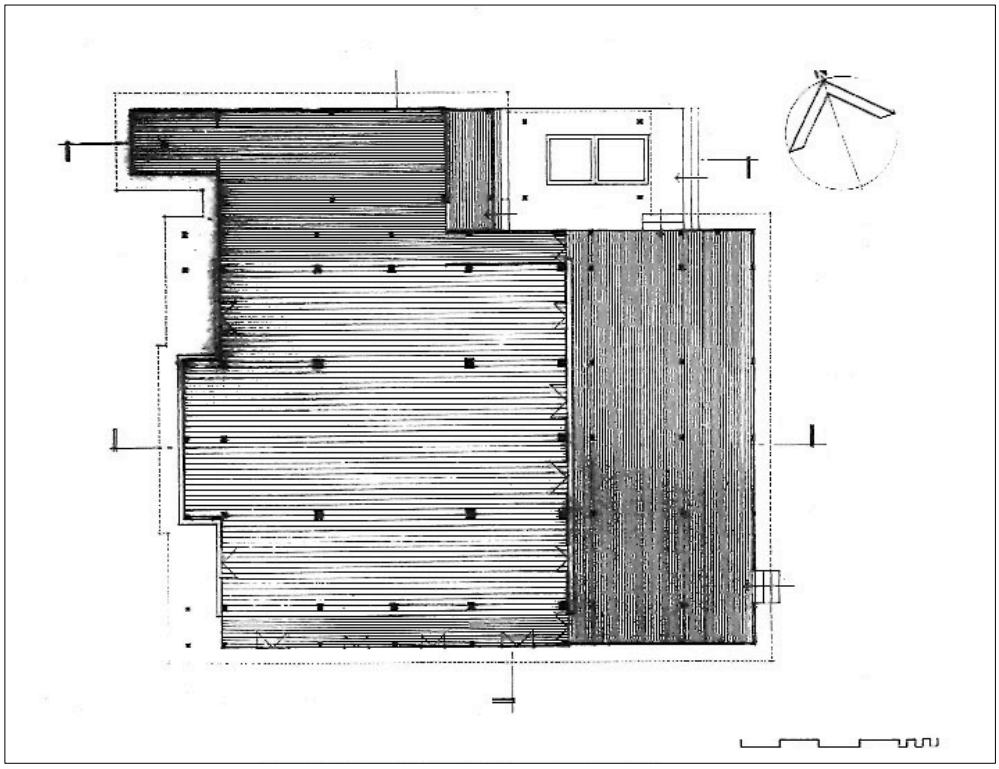
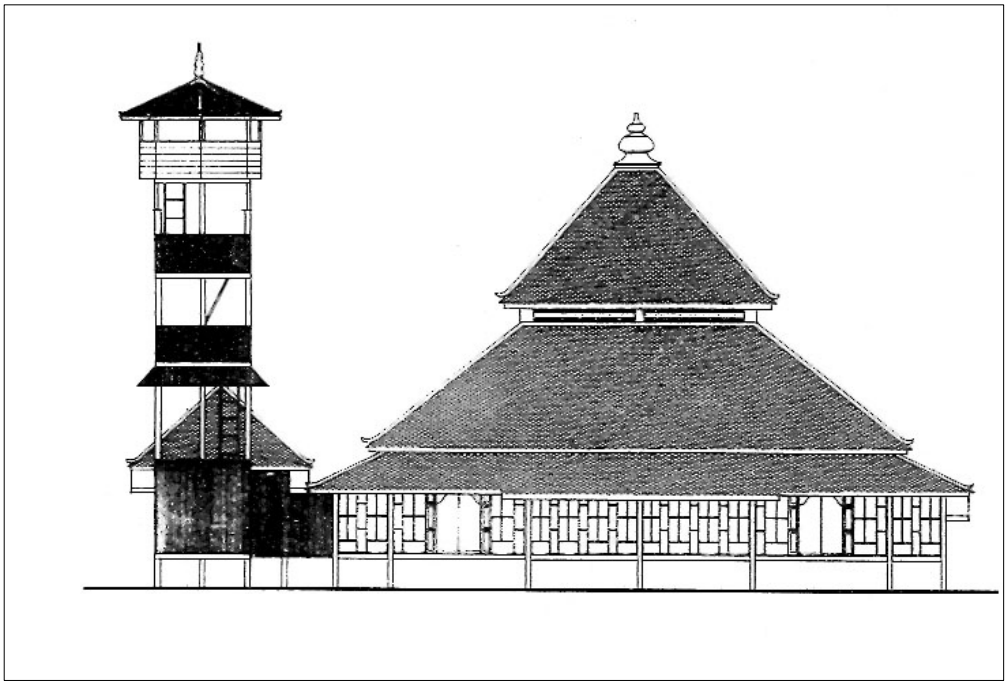


Figure 4-141 Masjid Kampung Laut original floor plan



SOURCE: KALAM

Figure 4-142 Masjid Kampung Laut west elevation

MKL was originally located in Kampung Laut, at the brink of Kelantan River (Figure 4-139). Kampung Laut reached its prosperity as a trade centre during the rule of Sultan Muhammad II in the 19th century. The mosque is believed to have been a centre of Islamic learning and propagation.

SOURCE: ARKIB NEGARA MALAYSIA

Figure 4-143 Masjid Kampung Laut exterior view in its original site in Kampung Laut, Kelantan.

A big flood in 1966 has caused massive destruction to the structure of the mosque which resulted with the mosque being abandoned and a new mosque was built as a replacement (Figure 4-143). MKL was dismantled in November 1967 by a group of Malay carpenters and relocated and rebuilt in Nilam Puri next to the Kelantan branch of University Malaya (Figure 4-140). Many of its original features were retained where possible.

MKL is made of the main prayer hall (Figure 4-141), attached *serambi* on the east (Figure 4-144), a minaret to the north-west of prayer hall, and toilet facilities. Around the mosque, sheltered seating areas (*wakaf*) are built for passers-by and visitors to have a rest as well as ample parking spaces and open area (Figure 4-145).

Figure 4-144 Entrance to the *serambi* of Masjid Kampung Laut

Figure 4-145 *Wakaf* (pavilion) built in the compound of Masjid Kampung Laut

4.3.11 MASJID KAMPUNG KELING, MELAKA

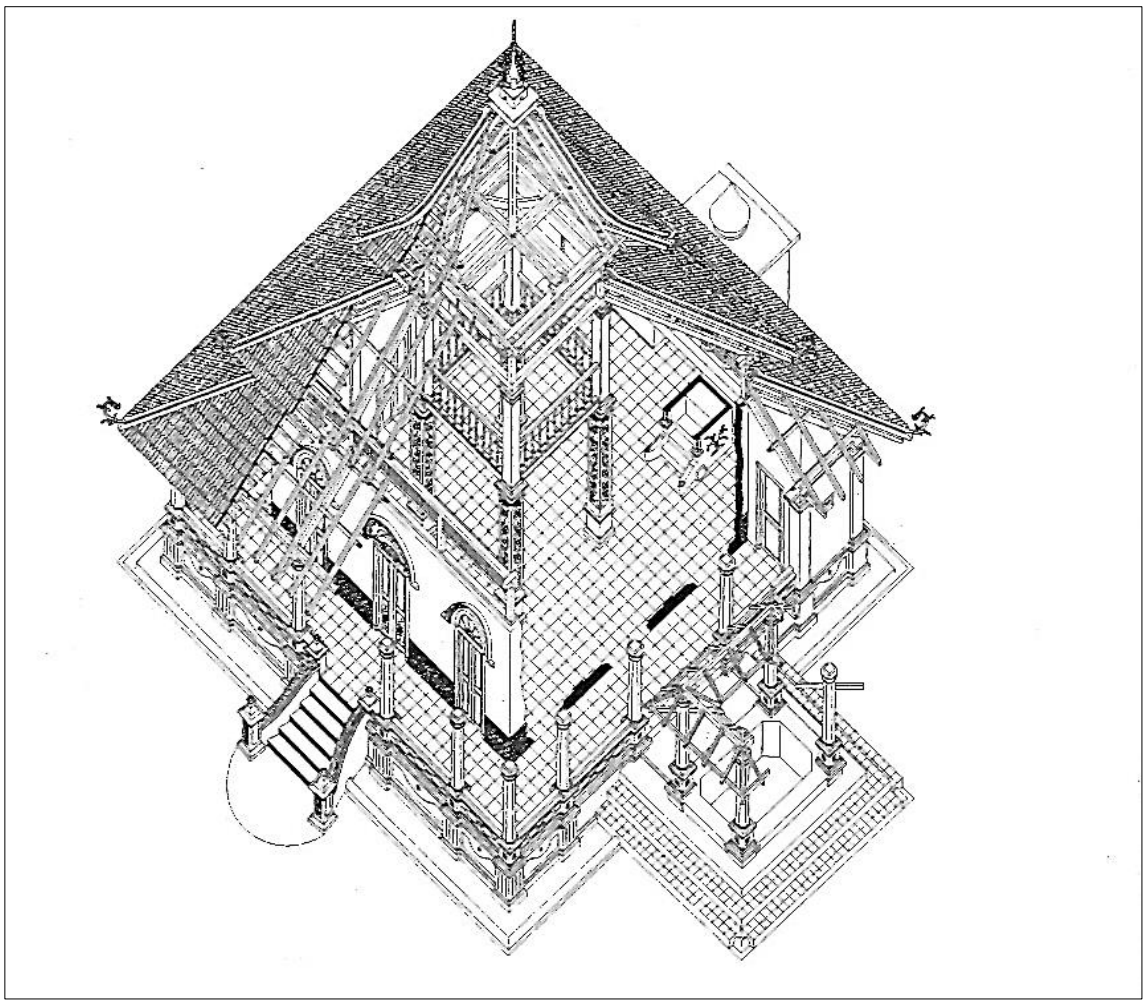
Location:	Melaka[79]
Date:	1748 (timber), renovated in 1872 (bricks)
Condition:	Well maintained
Original Patron:	Dato' Shamsuddin bin Arom, *Kapitan* for the Malay community during Dutch rule of Melaka
Material:	Cement-rendered brickworks with timber structural frame
Significance:	Historical: built during Dutch rule in Melaka Architectural: three tiered pyramidal roof form
Stylistic Influence:	Regional vernacular

Table 4-21 Masjid Kampung Keling background data

Figure 4-146 Masjid Kampung Keling and its minaret exterior view

[79] Main information from (Abdul Halim, 2004) and (Tajuddin Rasdi & Alice Sabrina 2003)

Masjid Kampung Keling (KKM) is located at Jalan Tukang Emas, Bandar Melaka. The road it is on is also known as Jalan Harmoni (harmony in English) as a tribute to the three prayer houses located next to each other on the same road: the mosque, the Hindu temple Sri Payyatha Viyanagar Moorthi and the Chinese temple Cheng Hoon Teng. The word "*Keling*" refers to a group of Muslim people of Indian descent who came from Cambay, India and traded in Melaka during the early Melakan Sultanate period. They thrived in commerce, and eventually settled and married local women. Dutch occupation forced the *Keling* people to settle in a much smaller community which is now known as Kampung Keling (Keling Village) (Rasdi u.d.).

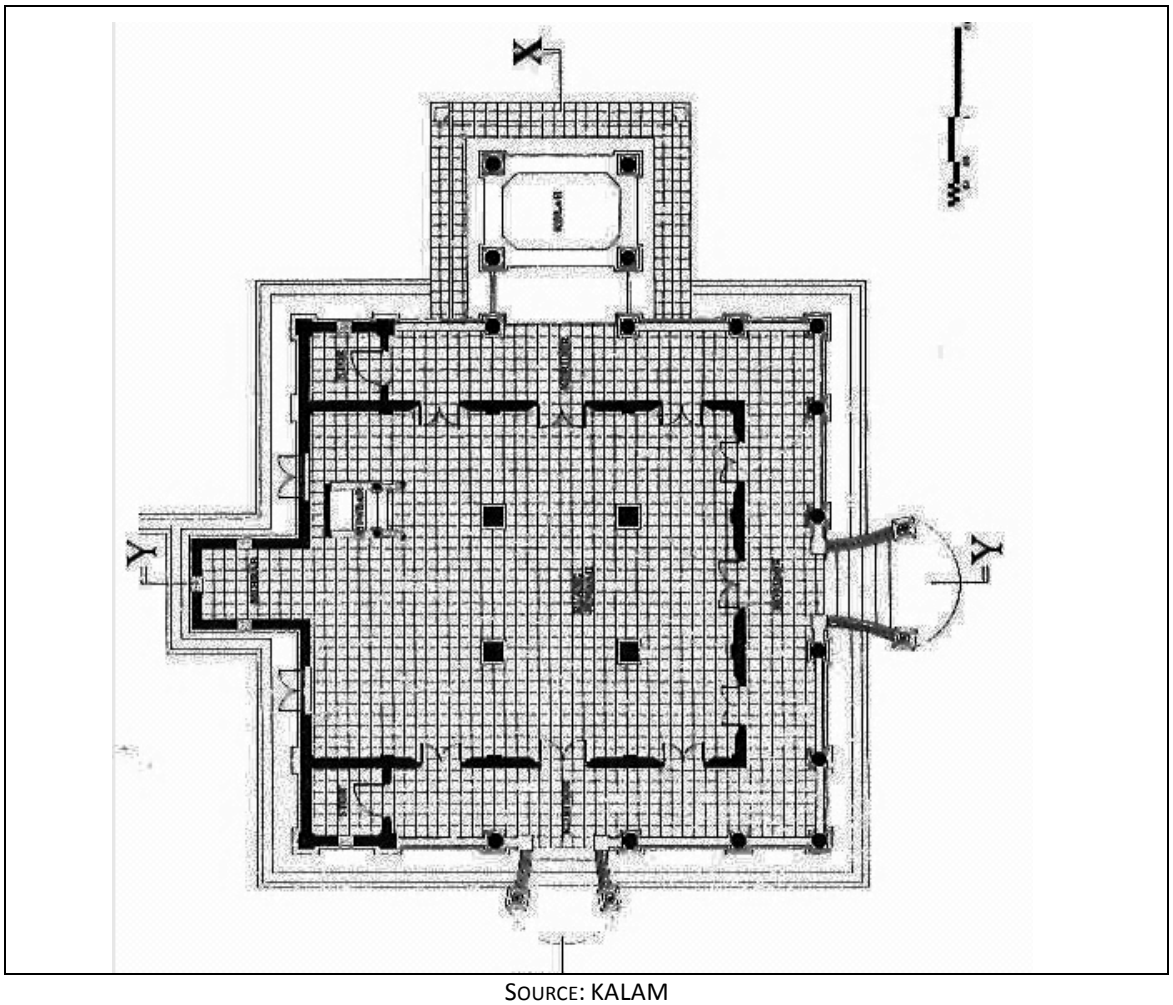


SOURCE: KALAM

Figure 4-147 Axonometric drawing of Masjid Kampung Keling architectural structure.

KKM was originally built in wood in 1748. At present however, all of its foundations, walls and columns have been replaced with cement-rendered brick construction. The current mosque is a structure upgraded in 1872 based on the original plan (Figure 4-147).

MKK is made of the main prayer hall and its *serambi* (Figure 4-148), the ablution pool, a detached minaret and a cemetery. The prayer hall and the *serambi* are built on a square plan with four central columns supporting three-tier pyramidal roof. The ablution pool is located to the north of the main prayer hall (Figure 4-143). It has similar setting with the ablution pool of Masjid Kampung Hulu Melaka where the pool is connected to the prayer space via means of passageways. The minaret is placed at the corner of the mosque's compound, to the north-east of the prayer hall.



SOURCE: KALAM

Figure 4-148 Masjid Kampung Keling floor plan.

PHOTO CREDIT: FAROUK YAHYA

Figure 4-149 *Serambi* of Masjid Kampung Keling

PHOTO CREDIT: FAROUK YAHYA

Figure 4-150 Masjid Kampung Keling ablution pool

The mosque is fenced off from the main road with brick wall fencing which at certain parts reach up to 2.5 meter. From the street level, the pyramidal roof and its ornamentation; the minaret and semi-circular pediment above the entranceway are the dominant features of the mosque. The main gate and the fence are built slightly slanted from the mosque's orientation. As such upon entering the main gateway, there is a slight confusion in determining which way is the main door to the prayer hall.

From the main gate, the main entrance is located to the left. A wide staircase with decorative white and blue tiles brings the visitors towards the prayer hall main door. To the sides of the top of the stairs are round Ionic columns which support a wide arch. The main door is rectangular with decorative half circle panel above the opening. Woodcarving of scrolls of leaves painted in gold becomes the background to a central wooden panel written with Arabic calligraphy of a prayer to enter the mosque. The door frames are made of solid wood with the plinth block made of marble. Each door leaf has a bottom and upper panels; the bottom part has a wood infill while the upper part has a stained glass decorative panel with green and white geometric pattern (Figure 4-151).

PHOTO CREDIT: FAROUK YAHYA

Figure 4-151 Masjid Kampung Keling doorway leading to its main prayer hall.

The mosque has cement-rendered brick walls covered with ceramic tiles; in some parts the tiles reach the ceiling level. The four central columns located in the prayer hall are made of wood and they support the uppermost level of the pyramidal roof. From outside, the three layer roofs with pointed ridge edges could be seen from a fair distant location. However these features could not be properly appreciated once one gets into the prayer hall as currently the roof forms are concealed by the suspended ceiling made with wooden panels. Most of the decorative features of the mosque are new. Due to poor recording, it is difficult to ascertain if any of the mosque's original features survived.

PHOTO CREDIT: FAROUK YAHYA

Figure 4-152 View of Masjid Kampung Kelings *mihrab* and *mimbar*.

Many old graves are found in the western and northern compound of the mosque (Figure 4-153). All of the grave markers have been painted in heritage green, thereby concealing their natural material, colour and design. One grave marker found was engraved with Arabic scripts dated 1273 *Hijri* which is equivalent to approximately 1876 C.E. In the Malay Peninsula, old grave markers came in two designs; the flat grave markers belong to female while the round cylindrical ones belong to male.

PHOTO CREDIT: FAROUK YAHYA

Figure 4-153 Old graves in the western and northern compound of the mosque.

4.3.12 MASJID TERNATE, MALUKU UTARA

Location:	Soasio, Ternate Utara[80]
Date:	1610
Condition:	Well maintained
Original Patron:	Sultan Fathillah
Material:	Cement-rendered brickworks with timber structural frame
Significance:	Historical: Ternate is one of the first region in the Malay World to accept Islam Architectural: five tiered pyramidal roof form
Stylistic Influence:	Regional vernacular

Table 4-22 Masjid Ternate background data

PHOTO CREDIT: ALI AKBAR

Figure 4-154 Masjid Ternate exterior view.

Masjid Sultan Ternate (MST) is located at Jalan Sultan Khairun in the village of Soasio, in the district of North Ternate within the province of North Maluku. Ternate converted to Islamic rule during the reign of Kolano Marhum (r.1465 – 1486). He was

[80] Main information from the book '*Masjid Kuno Indonesia'* (1999), published by Direktorat Perlindungan dan Pembinaan Peninggalan Sejarah dan Purbakala, Indonesia.

replaced by his son Zainal Abidin (r.1486 – 1500) and it was during his reign that Ternate adopted Islam as the religion and ruling system of its province.

There are different versions on when the mosque was first built and by whom. One source attributed its inception to Zainal Abidin's rule thereby making it one of the oldest Sultanate mosques in the archipelago; another version attributed its construction to the times when Ternate reached its height in economics and religious teaching during the rule of Sultan Khairun (r.1534 – 1570) and Sultan Baabullah (r.1570 – 1583).

A book on old mosques produced by Direktorat Perlindungan dan Pembinaan Peninggalan Sejarah (Directorate for Protection and Development of Historical and Archaeological Heritage Indonesia) attributed its construction in 1610 back to the time of Sultan Fatahillah with the construction of the mosque led by an expert builder by the name of Imam Kayoue Baba, who is said to be someone originating from outside Ternate.

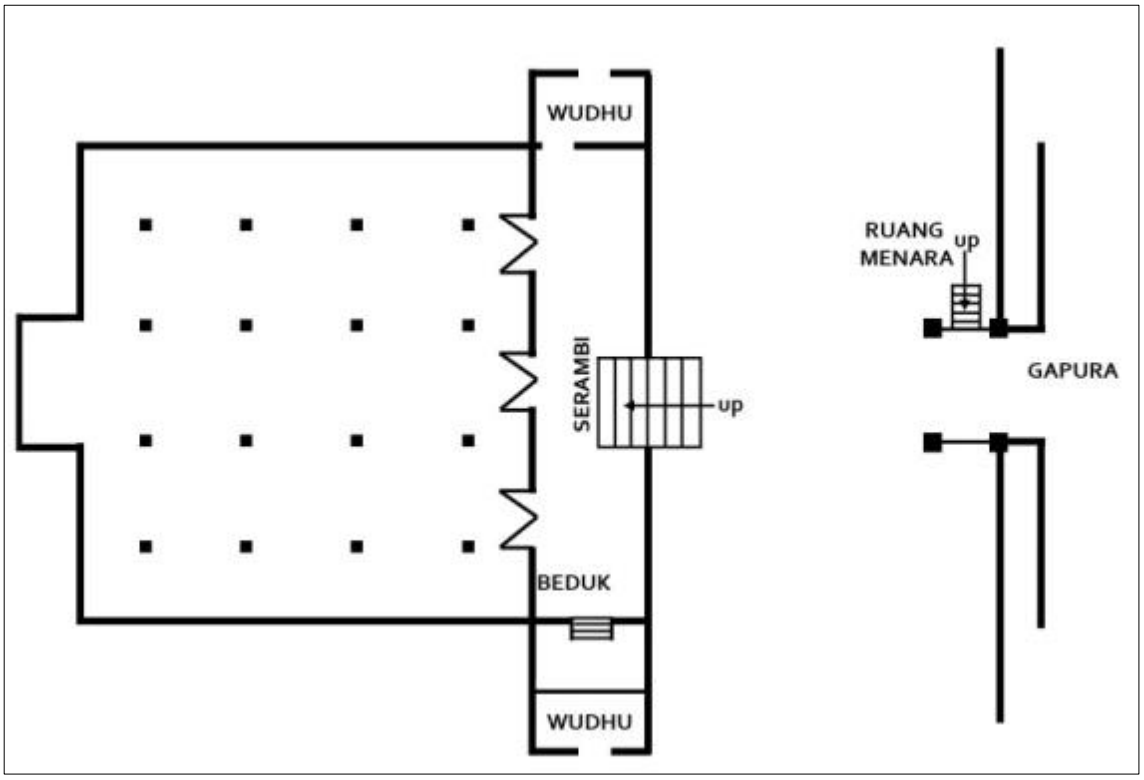


Figure 4-155 Masjid Ternate floor plan

MST is built approximately 150 meter from the seaside, with the Gamalama Mountain serving as its backdrop. *Kedaton Sultan Ternate* (Royal Palace of Ternate) is located approximately 100 meter to its north-west. The mosque compound is surrounded with cement-rendered brick fencing. Its main entranceway is located in the east in the form of an arched top gateway. When entering the gateway, one will pass underneath a small structure built on four square columns supporting with tier pyramidal roof – in the same style as the main mosque building. This building is used as a place to proclaim the *adhan.* A lightweight stairs is built to the right of the entranceway to give access for the muezzin to reach the top platform (Figure 4-156).

PHOTO CREDIT: ALI AKBAR

Figure 4-156 Gateway cum *adhan* house

MST was originally built as a square plan mosque with pointed pyramidal roof constructed in four layers.[81] The original roof material was palm leaves; currently it is replaced with metal sheeting. The walls are currently plastered bricks painted cream while the roof is covered with red metal sheeting.

[81] Some considered this mosque to be a five layered pyramidal roof mosque with the uppermost pointed part considered as the fifth layer

PHOTO CREDIT: ALI AKBAR

Figure 4-157 The exposed roof structure of Masjid Ternate

MST's unique feature is its four layered roof crown with a pointed pyramid at its peak. It has a wooden frame employing 4 main pillars (*soko guru*) with 12 perimeter columns supporting a sophisticated roof framing system employing not less than 300 roof rib framing members (Figure 4-157). The plan of the mosque is almost square measuring 22.4 by 21.75 meter.

The floor is covered with glazed tiles. The walls are said to be made of mountain rocks joined together using a combination of lime, sand and wax from a tree called *kalumpang*. Openings are found on all sides of these walls; they are placed at the junction where the walls meet. Each wall has arched windows on the upper part while on the bottom part of the walls rectangular windows with metal bars are built (Figure 4-158). The qibla wall houses a *mihrab*, in the form of a rectangular niche, a covered *mimbar* and *maqsurah* (Figure 4-159).

PHOTO CREDIT: ALI AKBAR

Figure 4-158 Masjid Ternate interior view

PHOTO CREDIT: ALI AKBAR

Figure 4-159 View of Masjid Ternate *mimbar, mihrab* and *maqsurah*

4.4 19-20TH CENTURY MOSQUES

4.4.1 MASJID LANGGAR TINGGI, JAKARTA

Location:	Pekojan, Jakarta Barat[82]
Date:	1829
Condition:	Well maintained
Original Patron:	Husein bin Abu Bakar Assegaf
Material:	Cement-rendered brickworks
Significance:	Historical: mosque built during Dutch rule in Jakarta Architectural: Dutch influence with Chinese craftsmanship
Stylistic Influence:	Colonial-European

Table 4-23 Masjid Langgar Tinggi background data

Figure 4-160 Masjid Langgar Tinggi exterior view

[82] Data taken from A. Heuken. S, (2003*) Mesjid-mesjid tua di Jakarta*, Jakarta: Yayasan Cipta Loka Caraka

Masjid Langgar Tinggi (MLT) is a small mosque located in Jalan Pekojan Raya 43, Tambora by the side of the river Kali Angke (Figure 4-160). It was originally built in 1828 by an Arab *'alim* known as Syaikh Sa'id Noom or Husein bin Abu Bakar Assegaf; who had come to the Java Island from Gujerat. MLT originally belonged to the Arab traders' community who resided in this small settlement previously known as *Qadhi Arab*.

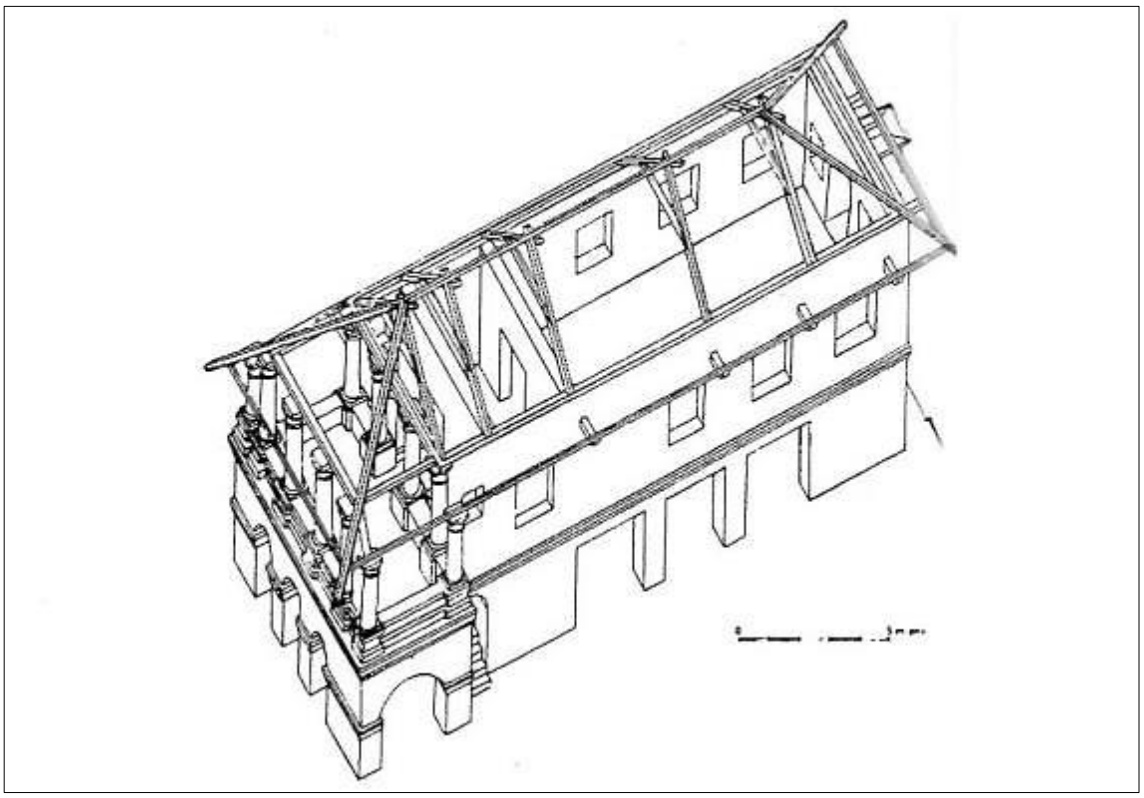


Figure 4-161 Axonometric drawing of Masjid Langgar Tinggi architectural structure.

The mosque is unique as it is a two-storey mosque with narrow rectangular floor plan (Figure 4-161). The upper floor is used as the prayer hall, while the ground level is currently used as shoplots (Figure 4-162). Its *mimbar* –although very small- is built with a pagoda roof top with pointed edges (Figure 4-163). Despite its patron and clients ethnic origin; the architecture of the mosque reflects Chinese craftsmanship evident in the small ornamentations found at the top part of the columns supporting a cantilevered first floor section in the north (Figures 4-164 and 4-165). The high roof slope and ornamental roof ridge end caps were a mixture of European (probably Dutch) architectural style with Chinese finials.

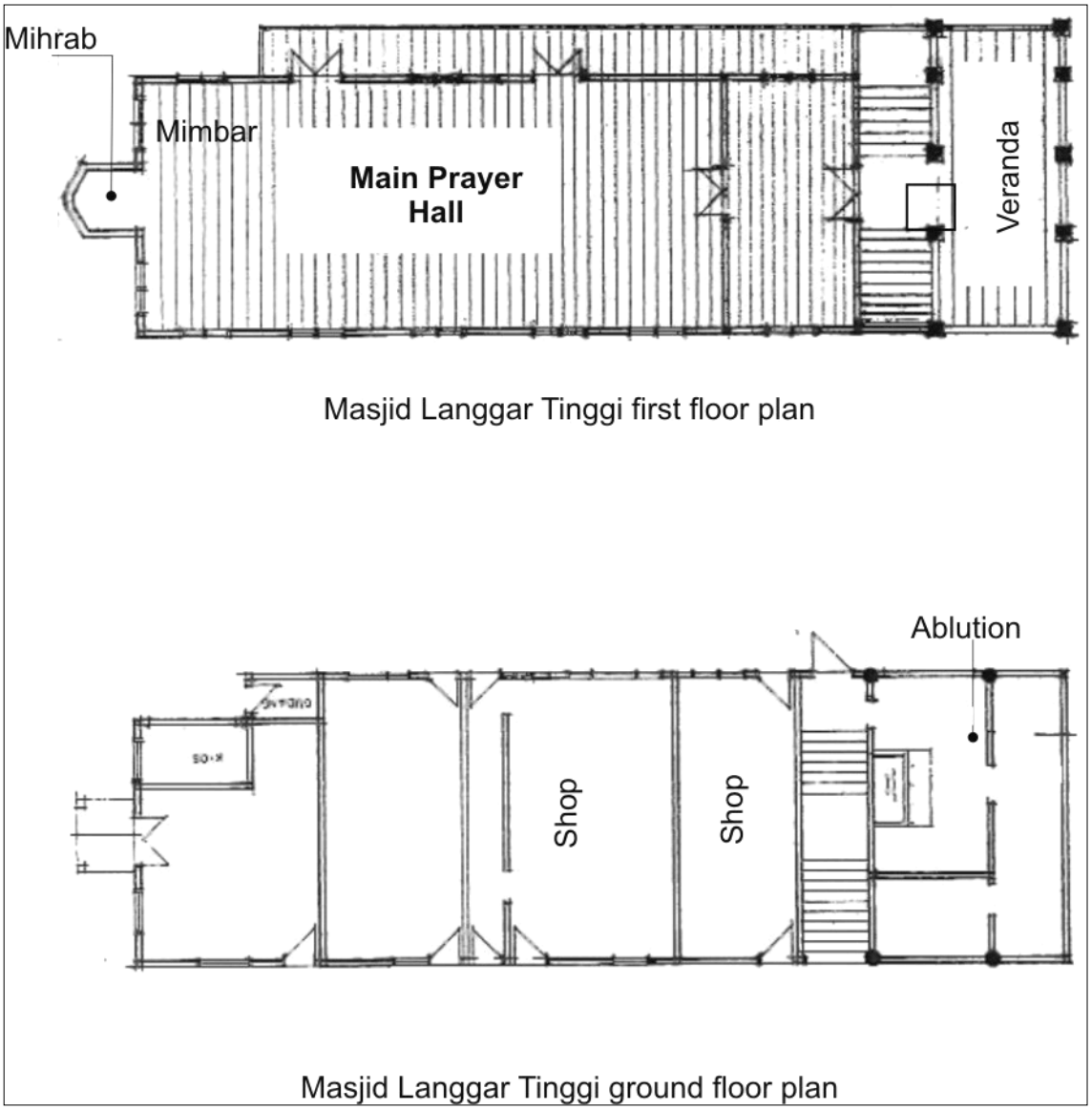


Figure 4-162 Masjid Langgar Tinggi floor plan

Figure 4-163 Masjid Langgar Tinggi interior view showing its *mimbar* and *mihrab*

Figure 4-164 Masjid Langgar Tinggi roof structure

Figure 4-165 Exterior wall view of Masjid Langgar Tinggi *mihrab* wall

4.4.2 MASJID AL-MAKMUR CIKINI, JAKARTA

Location:	Jalan Raden saleh, Cikini[83]
Date:	1850 (timber construction); current form: 1924-5 (rebuilt in bricks)
Condition:	Well maintained
Original Patron:	Raden Saleh; 1924 – K.H. Agus Salim and Sarikat Islam
Material:	Cement-rendered brickworks with timber structural frame
Significance:	Historical: Previously built on the site of current Rumah Sakit (Hospital) Cikini; ownership of land became source of dispute between Vereeniging Voor Ziekenverpleging and Sarikat Islam Architectural: two tiered pyramidal roof form on rectangular plan
Stylistic Influence:	Regional vernacular

Table 4-24 Masjid Al-Makmur Cikini background data

Figure 4-166 Masjid Al-Makmur exterior view

Masjid al-Makmur Cikini (MMC) is located at Jalan Raden Saleh Raya, Kelurahan Cikini in Central Jakarta. It is a community mosque built in collaboration with the leaders of Syarikat Islam in the municipality of Menteng in around 1850. It sits by the bank of river Ciliwung on its eastern side; while being surrounded by the

[83] Data taken from A. Heuken. S, (2003*) Mesjid-mesjid tua di Jakarta*, Jakarta: Yayasan Cipta Loka Caraka; and Masjid 2000

Churches of Eben Haizer and Seventh Day Adventist; as well as various Catholic schools.

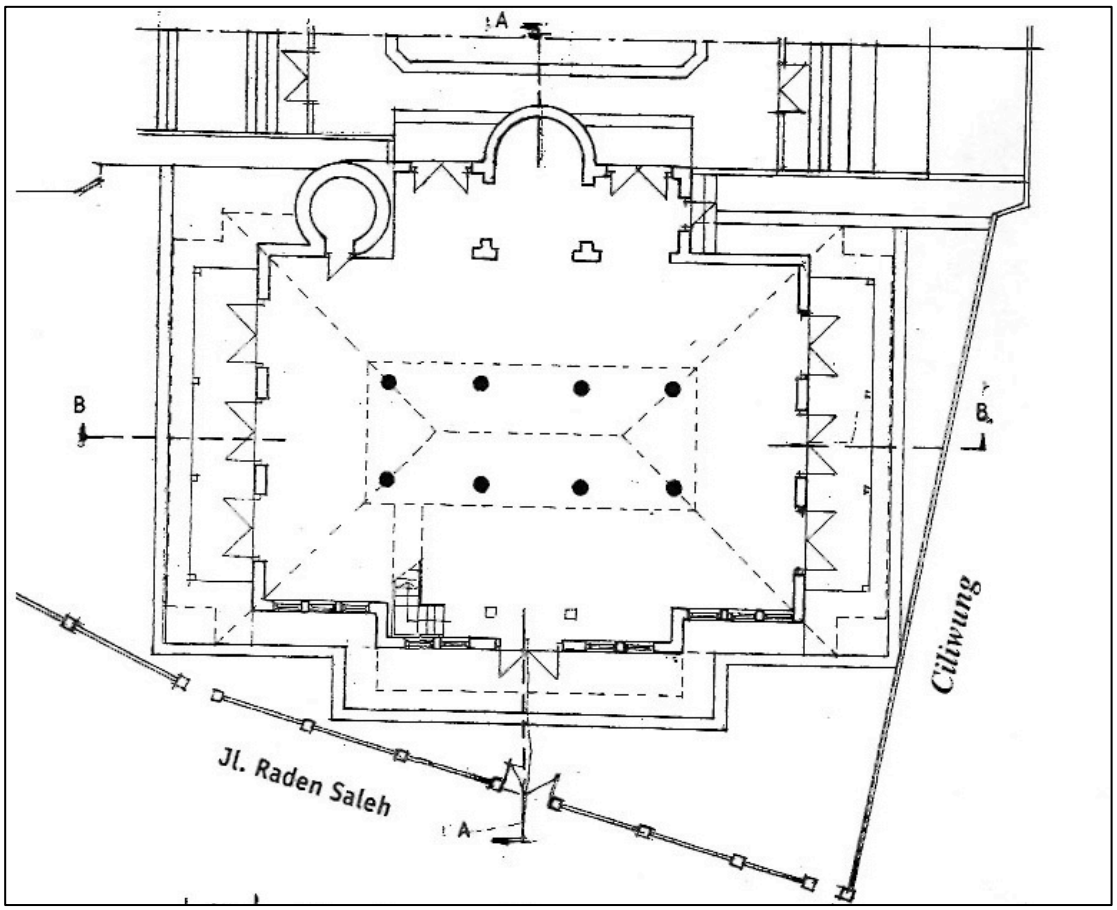


Figure 4-167 Masjid Al-Makmur original floor plan (not including extension)

The mosque complex is made up of the original prayer hall, a new double-storey prayer hall built next to it, a minaret and a two-storey religious school (b. 1993). The original prayer hall has a two-tiered gable roof construction sitting on a rectangular plan (Figure 4-167). In the middle of the prayer space is a *dikka* like structure which is supported by four round concrete columns; joined at the top by wooden pillars supporting the roof structure. The *dikka* is accessible by the stairs (Figure 4-168). This space is often used for recitation of the *Qur'an*. The entry to the top of the minaret is on the south-western of the prayer hall. The minaret has a round perimeter and reaches the height of 10 meters.

Figure 4-168 *Dikka*-like structure in the middle of the old prayer hall

Figure 4-169 Covered pathway joining the old and new

The new prayer hall is built to the west of the old part with covered passageway adjoining these two structures (Figure 4-169). It is built echoing the architectural language of the old mosque (Figure 4-171). The ground level is utilised as administrative offices, while the upper part is allocated for congregational prayers for both men and women. The mosque also has a public library and the main users of its facilities are the local community members.

Figure 4-170 Interior view of Masjid Al-Makmur showing its *mimbar* and *mihrab*

Figure 4-171 Exterior view of Masjid Al-Makmur
Sowing original building (red roof tiles) and extended new building (green roof tiles).

4.4.3 MASJID AGUNG SURAKARTA, SURAKARTA

Location:	Keraton, Surakarta[84]
Date:	1757-63
Condition:	Well maintained
Original Patron:	Sri Susuhan Pakubuwono III (r. 1749-88)
Material:	Cement-rendered brickworks with timber structural frame
Significance:	Historical: Sultanate mosque Architectural: three tiered pyramidal roof form
Stylistic Influence:	Regional vernacular ; Indian-Mughal; Colonial-European

Table 4-25 Masjid Agung Surakarta background data

PHOTO CREDIT: ALI AKBAR

Figure 4-172 Masjid Agung Surakarta exterior view.

Masjid Agung Surakarta (MAS) is located in Kelurahan Panembahan, Kecamatan Keraton, Surakarta, Central Java. It was originally built by Pakubuwono III although under the patronage of subsequent rulers, Pakubuwono IV, Pakubuwono VII and Pakubuwono X, the mosque underwent significant architectural changes and for

[84] Main information from Masjid 2000

that reason it is classified under the 19th and 20th century buildings. A stone inscription with Arabic scripts which looked relatively new attributes the conception of the mosque to Malik ‘Abd al-Rahman III, in the year 1177 A.H/1764 C.E. although based on literature studies the construction of the mosque was credited to the Solo rulers Pakubuwono.

PHOTO CREDIT: ALI AKBAR

Figure 4-173 A stone inscription with Arabic scripts

The mosque complex is located to the west of *the alun-alun utara* (north public square) of the Surakarta palace (*keraton*). It is surrounded with brick walls (b. 1858) and the complex is made up of the main prayer hall with adjacent *serambi*, the *pawestren* area to the left and right of the main prayer hall (b. 1850), *pesantren putra* and *putri* (religious schools for boys and girls) (b. 1914), a gateway (b. 1908) and a minaret (b. 1901) (Figure 4-174) .

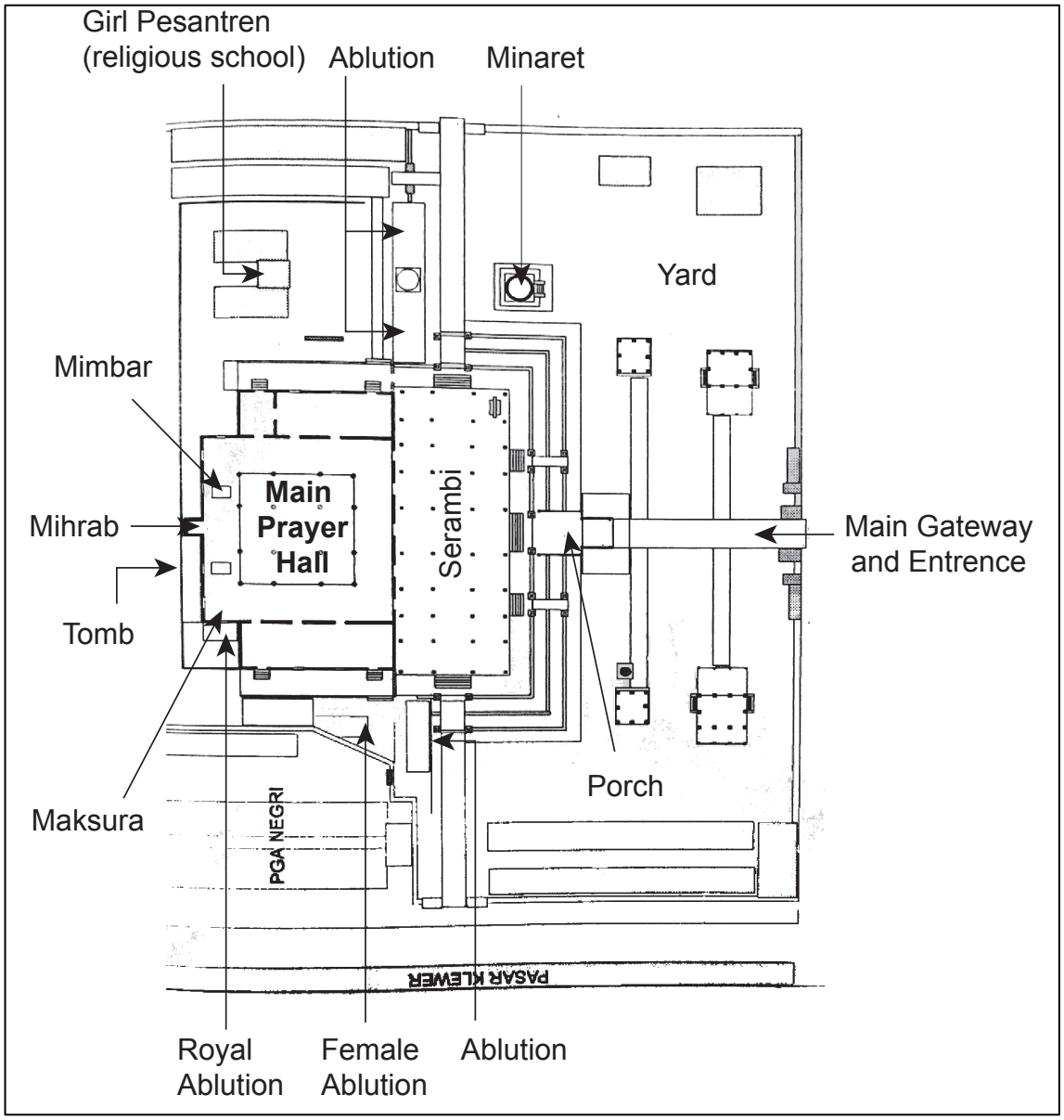
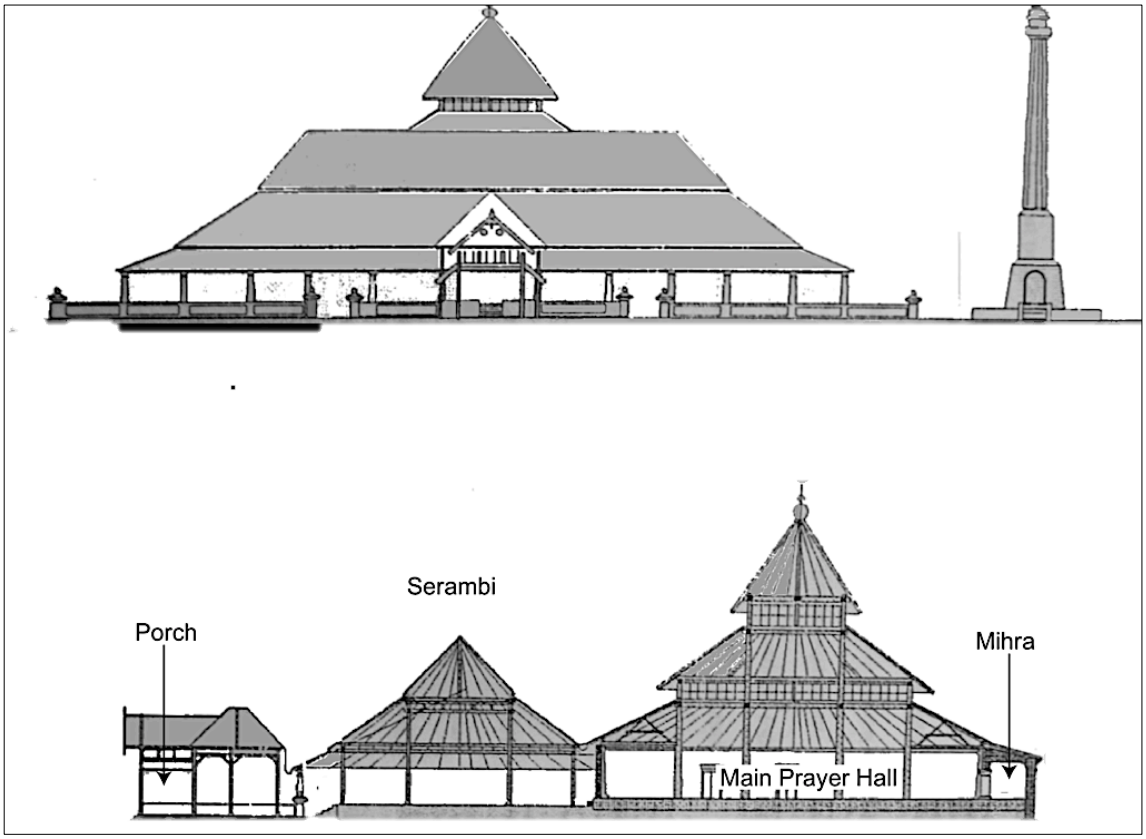


Figure 4-174 Masjid Agung Surakarta floor plan and site plan drawings



SOURCE: ARCHIVE OF FAKULTAS ARKEOLOGI, UGM

Figure 4-175 Masjid Agung Surakarta
Front elevation drawing (above) and cross-section drawing (lower)

The main gateway which provides entrance to the mosque complex faces the *alun-alun*. It has three openings in the form of pointed arches and it is built in a citadel-like construction, with small tower-like structures, crenelated top and a clock tower (Figure 4-176). The main building of the mosque is in the form of three tiered pyramidal roof with the *serambi* having a hip roof. The cylindrical minaret with a pointed top is placed to the north east of the mosque with a square base and a foundation which is shaped in the form of *padma* (water lily) (Figure 4-177).

PHOTO CREDIT: ALI AKBAR

Figure 4-176 Gateway entrance to the mosque complex.

SOURCE: (MASJID 2000)

Figure 4-177 The cylindrical minaret with a pointed to the north east of the mosque

The roof is supported with four main pillars in the construction configuration of *Tajug Lawakan Lambang Teplok* (Figure 4-178). In the *qibla* wall is the *mihrab* in the form of arched niche with wooden frame and spear like column to the sides of the niche. The top part of the frame in inscribed with Arabic scripts with led stained glass floral decorative panel decorating the half circle opening (Figure 4-179). The *mimbar* is made of wood, beautifully carved in a form which is a replica of the old Hindu seat-throne *padmasana* with curved arched tops (Figure 4-180). The mosque was originally funded and maintained by the *keraton*, however in 1952 it was taken over by the Ministry of Religious Affairs.

PHOTO CREDIT: ALI AKBAR

Figure 4-178 Masjid Surakarta main prayer hall exposed roof structure

PHOTO CREDIT: ALI AKBAR

Figure 4-179 The interior view of Masjid Surakarta showing its *mihrab*

PHOTO CREDIT: ALI AKBAR

Figure 4-180 The *mimbar* of Masjid Agung Surakarta

4.4.4 MASJID PUSAKA, KALIMANTAN

Location:	Tabalong, Kalimantan Selatan[85]
Date:	Early 19th century
Condition:	Well maintained
Original Patron:	Penghulu Rashid
Material:	Original material timber structure on stilts construction
Significance:	Historical: the mosque was used as a center for rallying people against the Dutch during Banjar War (1861-5). Architectural: three tiered roof form
Stylistic Influence:	Regional vernacular

Table 4-26 Masjid Pusaka background data

SOURCE: (HTTP://ID.WIKIPEDIA.ORG)

Figure 4-181 Masjid Pusaka exterior view.

[85] Main information from the book '*Masjid Kuno Indonesia'* (1999), published by Direktorat Perlindungan dan Pembinaan Peninggalan Sejarah dan Purbakala, Indonesia.

Masjid Pusaka (MP) is located in Desa Banus Lawas, Kabupaten Tabalong, South Kalimantan (Figure 4-181). The exact date of its conception is unknown although according to local tradition, it was built by Khatib Dayan (also known as Penghulu Rasyid) with the help of the leaders of Manyan community who were among the first to accept Islam such as Datu Ranggau, Datu Sri Panji, Datu Sari Negara, Datu Kartamina. Khatib Dayan is believed to be an alim who was sent to the village by the Sultanate of Demak. During the Dutch Colonial rule, this mosque was used as a centre to organise the people's army in the fight against the colonial during the *Perang Banjar* (Banjar war) which took place between 1861 and 1865. The mosque is maintained by the local community based on the concept of *musyawarah* (consultation and consensus).

SOURCE: (HTTP://ID.WIKIPEDIA.ORG)

Figure 4-182 The mosque three tiered roof with sharply pointed top.

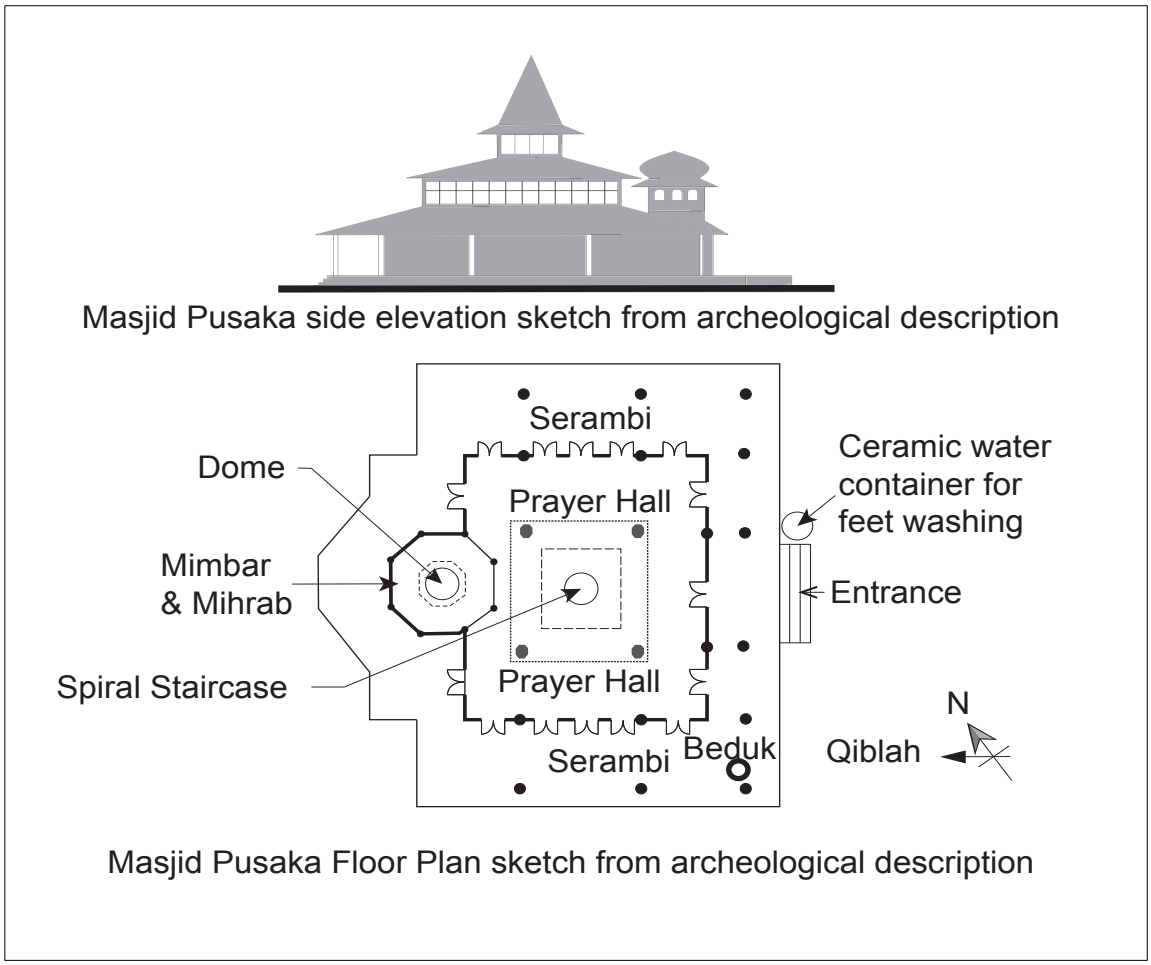


Figure 4-183 Masjid Pusaka floor plan and side elevation
Drawings based on archeological description

The mosque sits on a land surrounded by steel fence (Figure 4-182). The compound of the mosque – on the south, west and northern areas - is filled with unidentified old graves. The tomb of Penghulu Rasyid, its founder, is located in the northern compound. The mosque is a three tiered roof mosque with sharply pointed top. It was originally built in wood, originally on stilts, however the foundation was then filled with packed stones and covered with brick walls. The main prayer hall is square in plan measuring 13.85 m by 13.85 meter. The roof is supported by four main pillars and 12 perimeter columns. The *mihrab* is a protruding structure from the *qibla* wall with a dome built on top of it. It has an octagonal floor plan, with a two level ceiling height. This space is big enough to accommodate a *mimbar* which is placed to its right wall (Figure 4-183).

4.4.5 MASJID AZIZI, LANGKAT, SUMATERA

Location:	Tanjung Pura, Langkat [86]
Date:	1902
Condition:	Well maintained
Original Patron:	Sultan 'Abd al-'Aziz 'Abd al-Jalil (1897-1927)
Material:	Original material timber structure on stilts construction
Significance:	Historical: Sultanate mosque Architectural: Built in a mix of Mughal and Moorish-Spanish architectural idiom
Stylistic Influence:	Mughal, Moorish-Spanish, Colonial

Table 4-27 Masjid Azizi background data

PHOTO CREDIT: SWARADILA WEESEY (FLICKR.COM)

Figure 4-184 Masjid Azizi exterior view.

[86] Main information from '*Masjid Kuno Indonesia'* (1999), published by Direktorat Perlindungan dan Pembinaan Peninggalan Sejarah dan Purbakala, Indonesia.

Masjid Azizi (MA) is located in Tanjung Pura, Langkat, North of Sumatera (Figure 4-184). The mosque was originally a Sultanate Mosque and was historically located to the north of the palace of Sultan Deli and its *alun-alun*. To the east of the mosque currently sits *Gedung Pancasila* which was historically the courthouse of the sultanate. The tombs of Sultan Deli and his family members are located in the western compound of the mosque.

The mosque was completed in 1902; its conception was attributed to Sultan Haji Musa al-Khalidy al-Mu'azam Shah (r.1862-1896) and Sultan 'Abd al-'Aziz 'Abd al-Jalil Rahmat Syah (r. 1897 – 1927). The mosque is said to have been designed by an engineer from German and it was built using Chinese workers. The materials for the mosque were imported from Penang and Singapore.

There are two layers of fencing for the mosque compound. The first fence is made of iron and marks the boundary of the mosque compound inclusive of its cemetery area. The second fence is made of bricks with the height of one meter and it marks the compound allocated just for the mosque, the minaret and the tombs of the Sultan and immediate family members (Figure 4-185).

The main building of the mosque has an area of 25 meter by 25 meter with a total height of 30 meter. Porches protrude from the east, south and northern walls and are adjoined by the *serambi* circulating the main prayer hall. The *serambi* is a semi-open area with round columns marking the perimeter forming pointed arches. It is covered by a flat roof and the rows of columns supporting the roof form structural grids that support small domes. A big central dome is raised from the centre of the main prayer area; while smaller domes are placed on the roof top of the protruding porches (Figure 4-186). The structure supporting the central dome forms an octagonal floor area within the main prayer hall (Figure 4-187).

SOURCE: (HTTP//: TAPAKKAKI.WORDPRESS.COM)

Figure 4-185 Masjid Azizi exterior view showing boundary fence and minaret

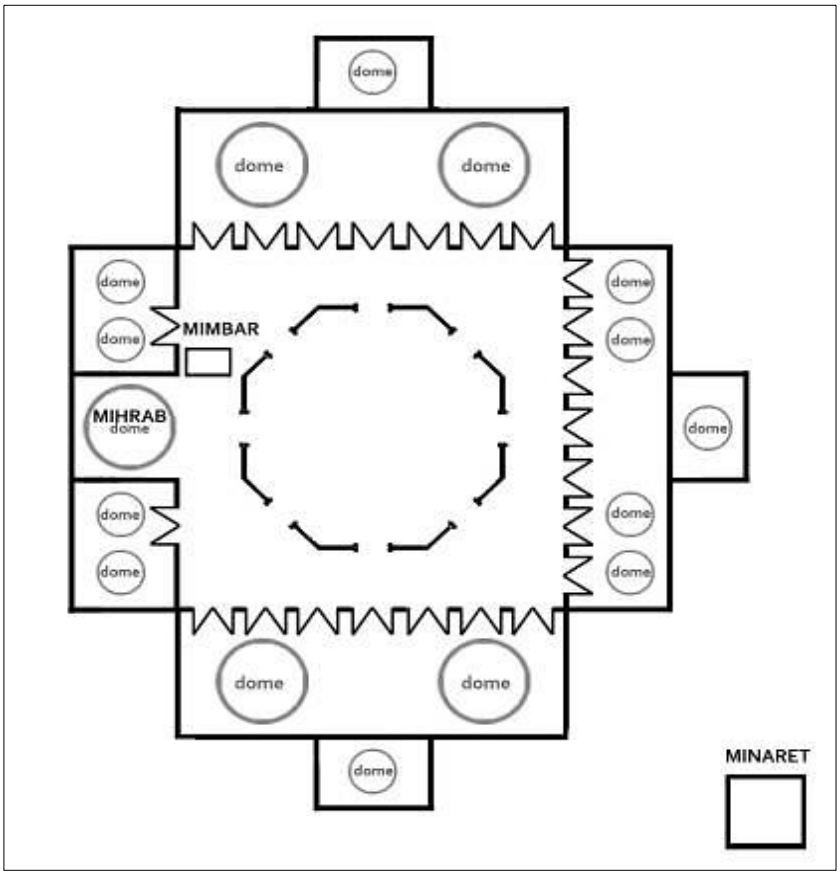


Figure 4-186 Masjid Azizi floor plan layout

SOURCE: (HTTP//:TAPAKKAKI.WORDPRESS.COM)

Figure 4-187 Masjid Azizi interior view showing its *mimbar.*

4.4.6 MASJID PONDOK TINGGI, SUMATERA

Location:	Tanjung Pura, Langkat [87]
Date:	1902
Condition:	Well maintained
Original Patron:	Sultan 'Abd al-'Aziz 'Abd al-Jalil (1897-1927)
Material:	Original material timber structure on stilts construction
Significance:	Historical: Sultanate mosque Architectural: Built in a mix of Mughal and Moorish-Spanish architectural idiom
Stylistic Influence:	Mughal, Moorish-Spanish, Colonial

Table 4-28 Masjid Pondok Tinggi background data

PHOTO CREDIT: CHRIS JULES

Figure 4-188 Masjid Pondok Tinggi exterior view.

Masjid Pondok Tinggi (MPT) is located in Desa Pondok Tinggi, Kerinci, Jambi (Figure 4-188). It is a community mosque and the patron of this mosque is unknown. According to tradition, the design of the mosque was credited to Nuryan M. Tiru from Rio Mandaro. The mosque has a square plan with three tiered pyramidal roof. The roof

[87] Main information from '*Masjid Kuno Indonesia'* (1999), published by Direktorat Perlindungan dan Pembinaan Peninggalan Sejarah dan Purbakala, Indonesia.

is supported by 36 pillars with four soko guru supportingthe upper-most roof structure, eight pillars supporting the second layer of the rood, and twenty four perimeter columns supporting the lower level and forming wall panels (Figure 4-189). The columns are adjoined at the tops with wooden beams carved with tendrils.

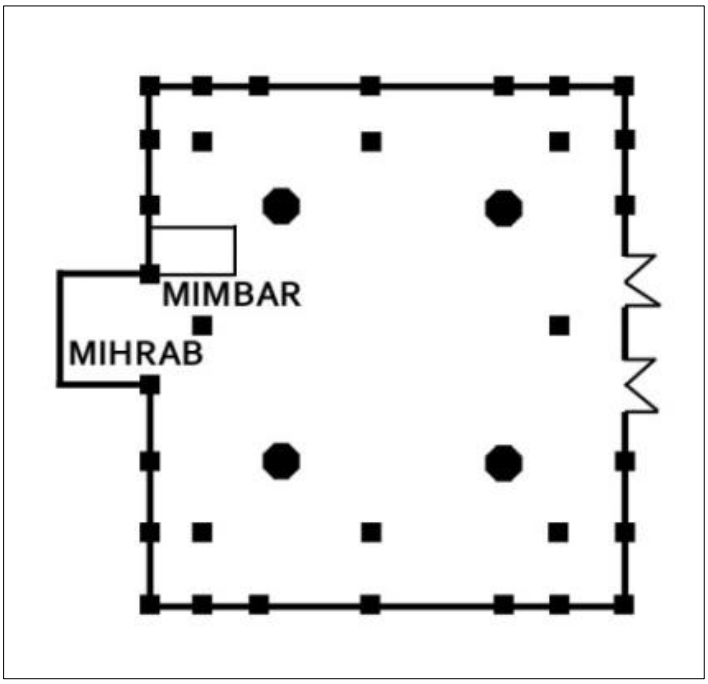


Figure 4-189 Masjid Pondok Tinggi floor plan structural layout

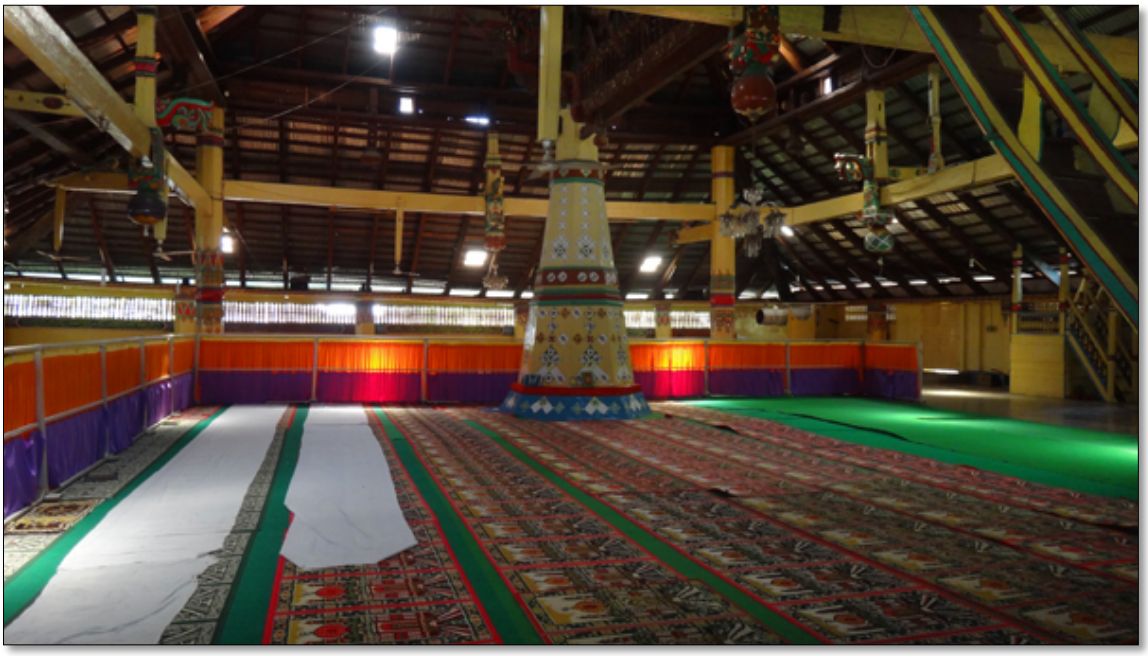
PHOTO CREDIT: YULIAN ADRIANSYAH

Figure 4-190 Masjid Pondok Tinggi interior view of its *mimbar* and *mihrab wall.*

The *mihrab* of the mosque is a rectangular structure which protrudes from the western wall outwards. The opening towards the *mihrab* has an arched top decorated with geometric and vegetal motifs. The walls of the *mihrab* are covered with porcelain tiles decorated with floral motifs. The *mihrab* structure is covered from the outside with a roof with a domed top.

The *mimbar* of the mosque is located to the right of the prayer hall. It is a wooden *mimbar* with decorative carvings bearing floral, vegetal and *kala makara* motifs. The *mimbar* has six columns forming a frame which supports a dome top (Figure 4-190).

The mosque does not have a minaret. The *adhan* is proclaimed from a platform which is raised underneath the roof space in the prayer hall. The platform is made of wood and accessible through a stairs made with 17 steps. The structure is also carved with floral and vegetal motifs (Figure 4-191).



SOURCE: (HTTP//:DANANWAHYU.FILES.WORDPRESS.COM)

Figure 4-191 Interior of Masjid Pondok Tinggi: to the left is the stairs towards the platform

4.4.7 MASJID PULAU PENYENGAT, RIAU

Location:	Pulau Penyengat [88]
Date:	1803-1832
Condition:	Well maintained
Original Patron:	Raja Muda 'Ali; Raja 'Abdal-Rahman
Material:	Original material timber structure, modified to cement-rendered brickworks in 1832
Significance:	Historical: Sultanate mosque Architectural: First mosque to have dome
Stylistic Influence:	Probably Ottoman

Table 4-29 Masjid Pulau Penyegat background data

Figure 4-192 Masjid Pulau Penyengat exterior view.

Masjid Pulau Penyengat (MPP) is also known as Masjid Raya Sultan Riau (Figure 4-192). It is located in the island of Pulau Penyengat, which was historically

[88] Main information from '*Masjid Kuno Indonesia'* (1999), published by Direktorat Perlindungan dan Pembinaan Peninggalan Sejarah dan Purbakala, Indonesia.

part of the Johor-Riau Sultanate. The mosque was originally built in wood as part of the residence for Engku Puteri Raja Hamidah, the wife of Sultan Mahmud Syah (r. 1761-1812); however under the rule of Sultan 'Abd al-Rahman (r. 1831-1844), the mosque was completely renovated and rebuilt using bricks – which according to tradition – bonded together with white eggs.

Figure 4-193 Masjid Pulau Penyengat : view from the sea

Figure 4-194 The main staircase entrance of Masjid Pulau Penyengat

The mosque is placed on top of a small hill overlooking the ocean (Figure 4-193). It is reached via a series of stairs which end with a gateway with two rectangular posts which are joined at the top with decorative wrought iron forming an arch (Figure 4-194). The whole complex could be seen from afar due to its vibrant yellow colours and green trimmings. The mosque complex consists of the main prayer hall, toilet and ablution building to its south and north; management cum meeting buildings to its north-east and south-east; as well as a *wakaf* (open hut) placed to the sides of the main path leading to the prayer hall. A cemetery containing old graves with most of the stone markers covered with yellow cloth is located to the left and right of the *mihrab* (Figure 4-195).

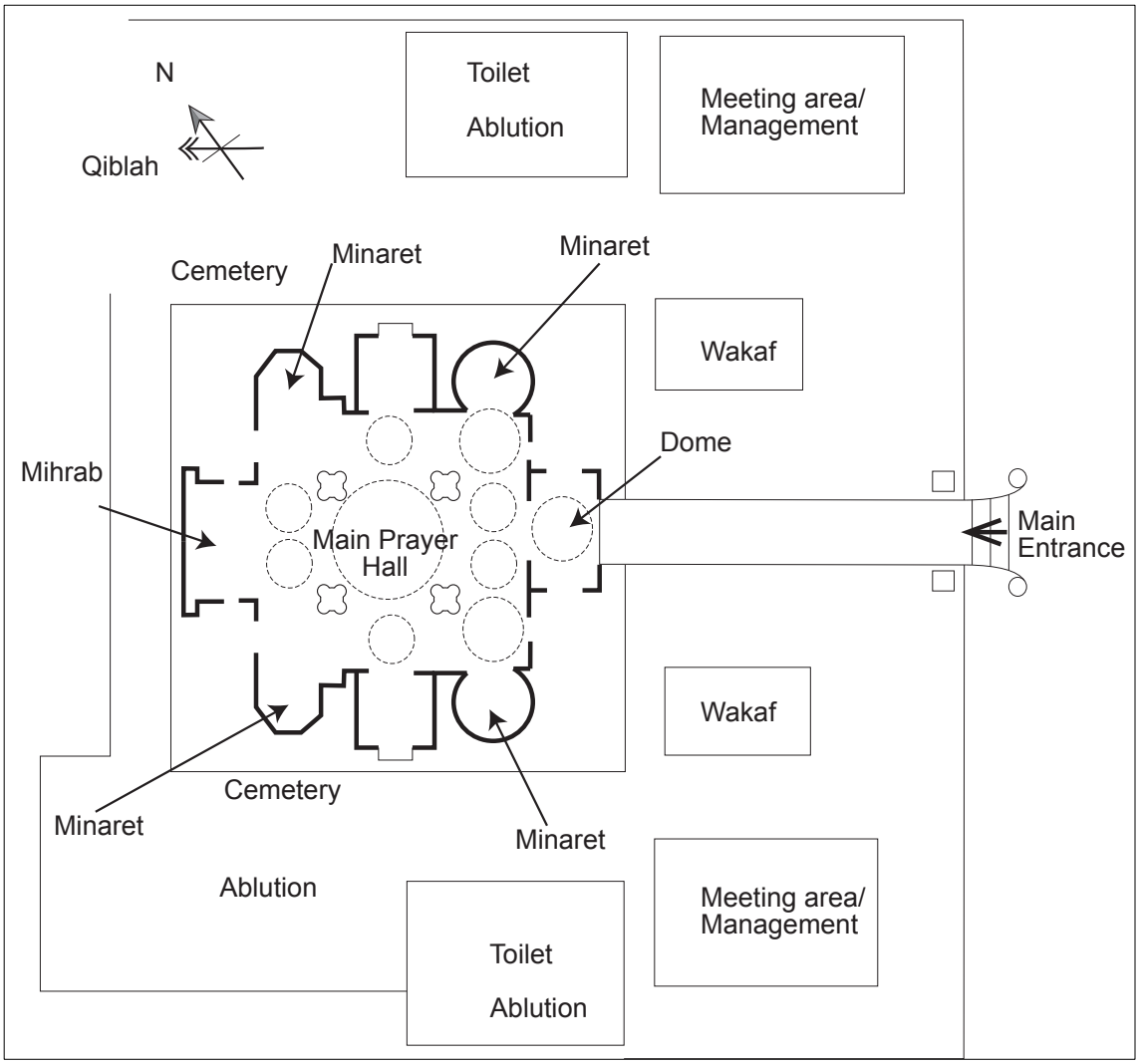


Figure 4-195 Masjid Pulau Penyengat site plan layout

The main prayer hall has a rectangular plan (20 meter by 18 meter) with four massive central columns supporting its central dome. In total the mosque has 13 onion-shaped domes, and 4 pointed minarets. Two of the minarets have round diameters while the other two have octagonal diameters. The mosque is considered to be the first mosque in the Malay Archipelago to have domes[89]. The *mimbar* of the mosque is made of wood and is highly decorative with floral and vegetal carvings; all painted in gold. Contrary to the normal practice, the *mimbar* is placed at the centre of the *qibla* wall in the niche provided for the *mihrab*. Two round classical columns are located to the sides of the *mihrab-mimbar* forming an arch (Figure 4-196).

Figure 4-196 Masjid Pulau Penyengat interior view showing its *mimbar* and *mihrab.*

[89] Wisatamelayu.com

4.4.8 MASJID PATINBURAK, IRIAN JAYA

Location:	Fak-fak [90]
Date:	c.1870
Condition:	Well maintained
Original Patron:	Raja Wertuar VI Simempes; Raja Wertuar VII Waraburi
Material:	Original material sago leaves for roof and timber wall claddings
Significance:	Architectural: Resembles a chaplain
Stylistic Influence:	Regional

Table 4-30 Masjid Patinburak background data

SOURCE: MEDIAFAKFAK.COM

Figure 4-197 Masjid Patinburak exterior view.

Masjid Patinburak is named after the village it is in, within the region of Fak-fak in Irian Jaya (West Papua) (Figure 4-197). It is a fisherman village with the population made of only 35 families. Islam came to the region from Tidore, which accepted Islam in the 15th century. It is believed that the mosque was built by Raja Tertuar VI (Semempes) who was elected as king by the Sultan of Tidore (Muhammad Taher

[90] Main information from '*Masjid Kuno Indonesia'* (1999), published by Direktorat Perlindungan dan Pembinaan Peninggalan Sejarah dan Purbakala, Indonesia.

Alting) in 1886. Its construction was completed by Raja Tertuar VII (Waraburi)[91]. The form of the mosque resembles a church which is seen by the locals as reflecting the tolerance between the two religious groups.

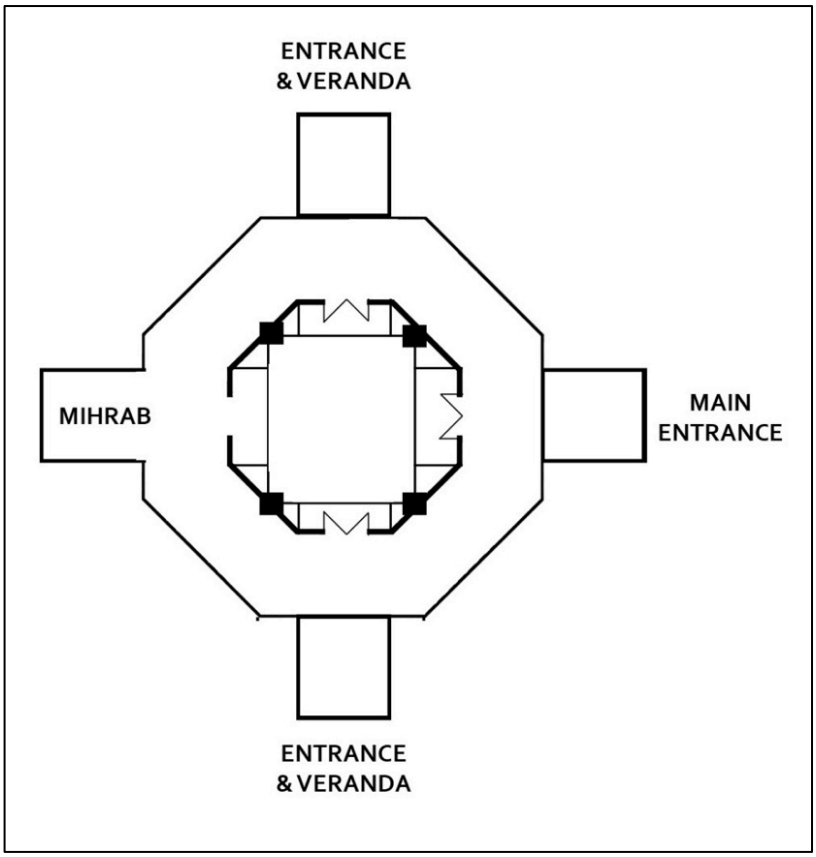


Figure 4-198 Masjid Patinburak floor plan structural layout

Masjid Patinburak is a small mosque sitting on a compound with the size of 16.1 meter by 14.6 meter. The main prayer is octagonal in plan, with porches projecting outwards forming a cruciform (Figure 4-198). Three of the porches function as entrances to the prayer hall, while the west-facing porch functions as the *mihrab*. Four main pillars measuring 20 cm by 20 cm are located in the centre supporting the upper roof levels. The pillars sit on stone pedestals to the height of 30 centimetres. The central part of the prayer hall forms a three level construction which from a far looks like a small tower (Figure 4-199). The protruding porches have half-height walls. Their hip roof structures are extended from the main roof of the prayer hall.

[91] Other sources credited the building to an Imam Abuhari Kilian. See Wikipedia.com of the topic; and citizen.images.kompas.com/blog/2009/05/02/meniti-jejak-islam-di-kokas-14425

The roof material was originally made of thatch, with the wall materials made of wood. In renovation projects that began in 1942, the roof material was replaced with metal sheets. In 1963 the wall material was replaced with *tembok rabik;* a technique whereby the timber frames was tied up with woven bamboo and was then cement-plastered and finished with lime-mixed paints. The walls are not completely sealed off with the cement; some parts were purposely left uncemented to provide ventilations for the prayer space.

SOURCE: (HTTP//: REPUBLIKA.CO.ID)

Figure 4-199 Masjid Patinburak main prayer hall interior view with its exposed roof structure

4.4.9 MASJID LEBUH ACHEH, PULAU PINANG

Location:	Lebuh Acheh [92]
Date:	c.1808
Condition:	Well maintained
Original Patron:	Tunku Syed Hussein Idid
Material:	Cement-rendered brickworks
Significance:	Historical: Lebuh Acheh (Acheen Street) was the earliest Malay settlement in Pulau Pinang, founded in 1792.
Stylistic Influence:	Regional; Colonial-European

Table 4-31 Masjid Lebuh Acheh background data

Figure 4-200 Masjid Lebuh Acheh exterior view

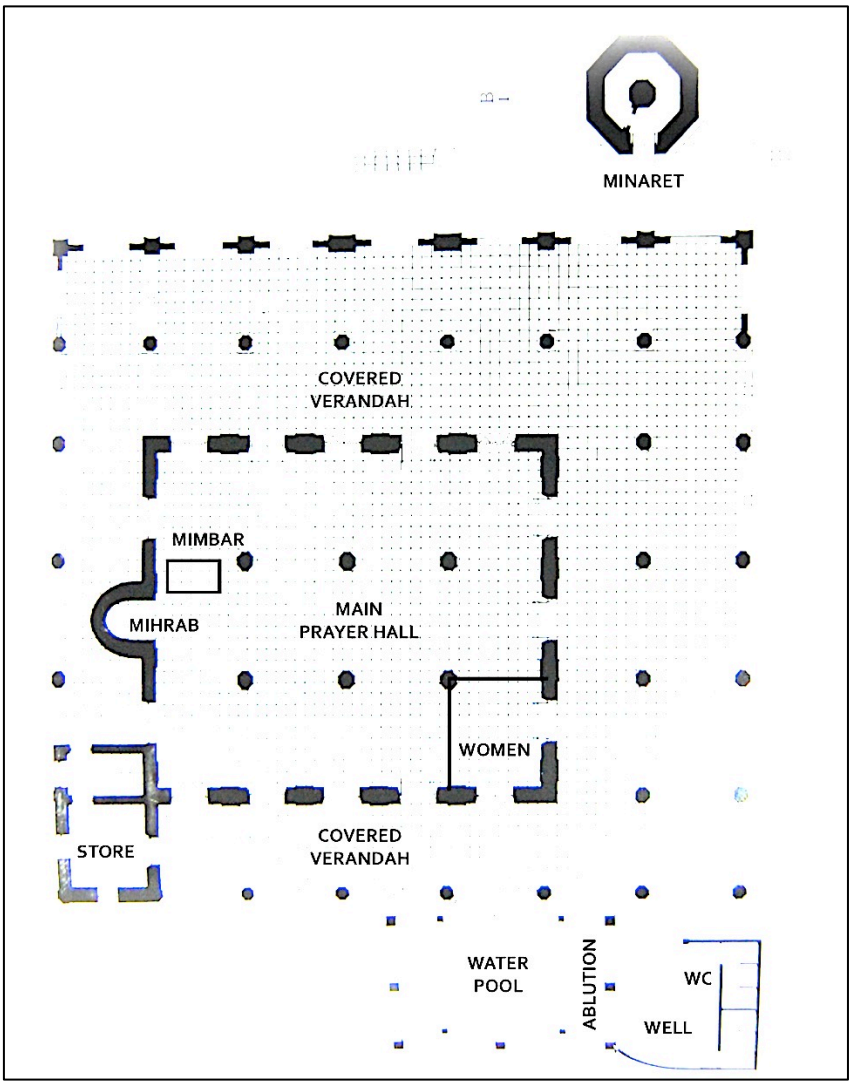
Masjid Lebuh Acheh (MLA) was built in 1808 by Tunku Syed Hussein Idid, a wealthy Achenese merchant of Arab descent and a descendant of the Sultan of Acheh, who had settled in Penang upon the invitation of Captain Francis Light. It sits near the Acheen Street (Lebuh Acheh) which is said to have been the earliest Malay settlements in Penang (Figure 4-200). This settlement was historically located close to the port of

[92] Main source of information: KALAM

Pengkalan Weld. Currently, the mosque is almost hidden by the encroachments of newly-built Chinese shop lots on the Acheen Street and Lorong Lumut; and small numbers of Malay living quarters in the south-eastern part of its compound (Figure 4-201).

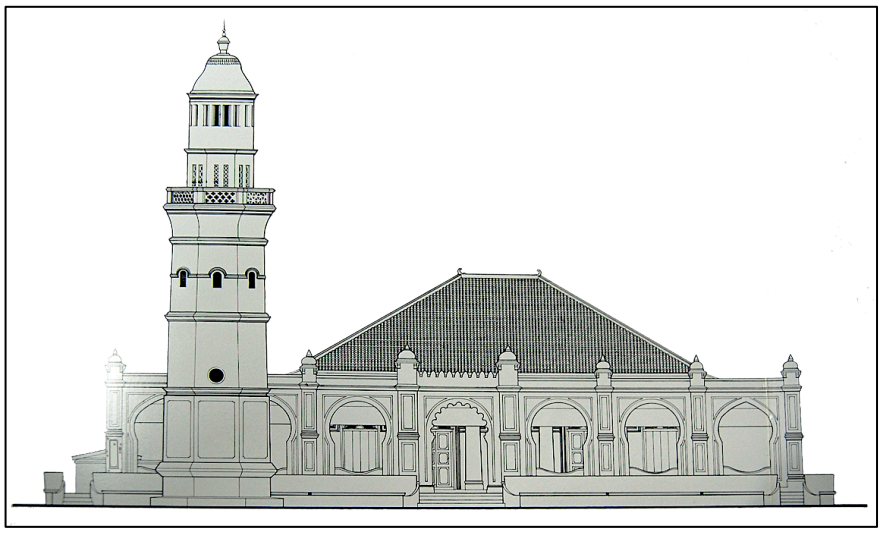
The MLA complex consists of the main building, an octagonal plan minaret on the north, a *madrasah* near south-east, ablution area with water pool in the south; and a cemetery and a tomb house to its west.

Figure 4-201 Masjid Lebuh Acheh site plan



SOURCE: KALAM

Figure 4-202 Floor plan structural layout



SOURCE: KALAM

Figure 4-203 North elevation.

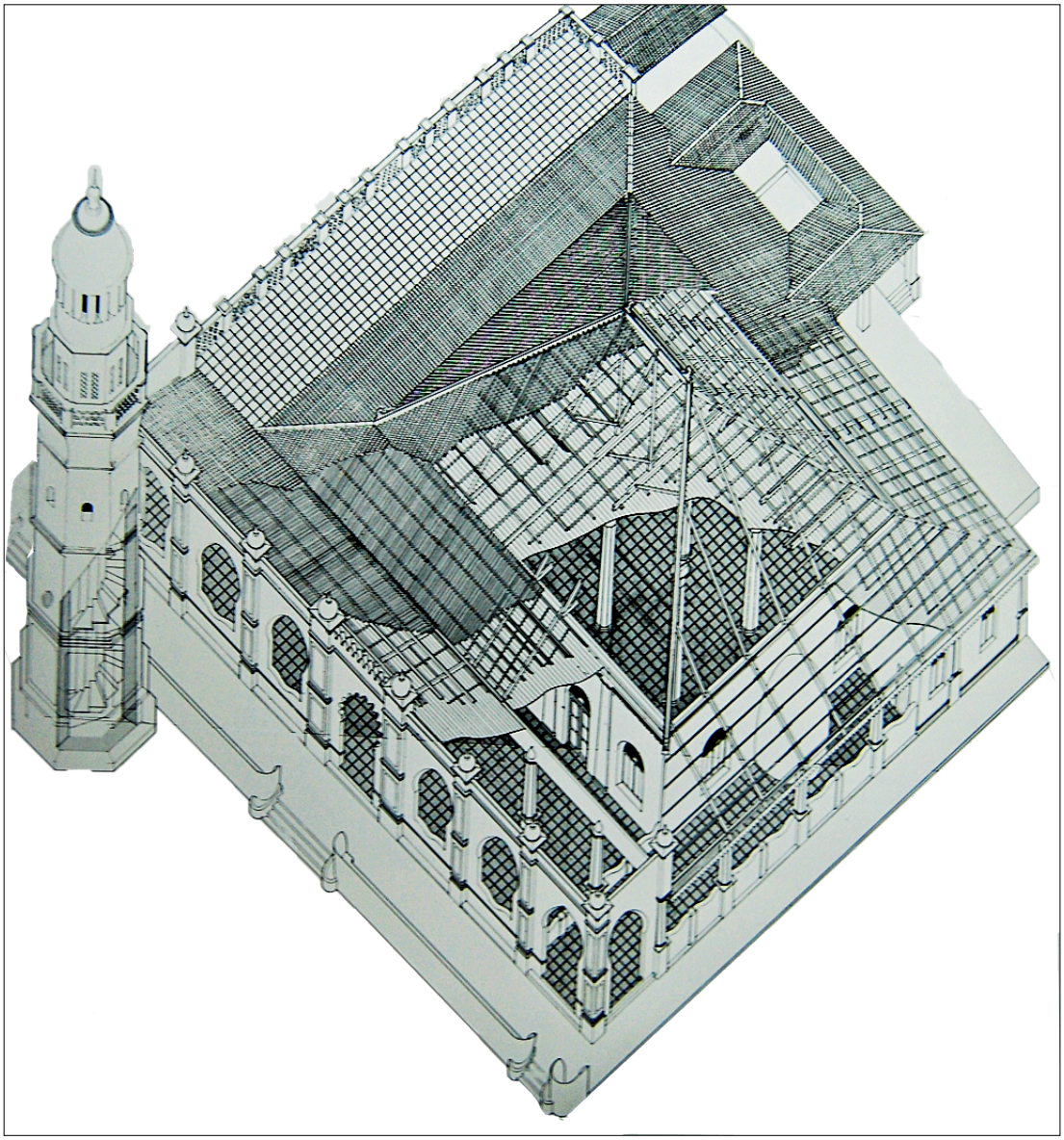
Figure 4-204 Masjid Lebuh Acheh ablution pool

(A)

(B)

Figure 4-205 The *mimbar* of Masjid Lebuh Acheh
(a) the *mimbar* front view and (b) the *mimbar* side view.

The mosque is said to have been influenced by Acehnese architecture; which the present study could not ascertain. The main roof is a hip roof with parapet supported by square based columns with small domes and brackets ornamenting the tops. The columns form colonnades joined by horse-shoe arches with the main entrance way arch scalloped in the style of Moorish arch. The architectural grammar is mostly influenced by Colonial-Mughal style rather than local vernacular; as evident in the form of the minaret as well as the various types of arches employed in the design scheme, from horse-shoe, pointed to scalloped (Figure 4-206, 4-207 and 4-208).



SOURCE: KALAM

Figure 4-206 Axonometric drawing of Masjid Lebuh Acheh architectural structure.

Figure 4-207 Masjid Lebuh Acheh main prayer hall interior showing its *mimbar* and *mihrab* wall

Figure 4-208 Masjid Lebuh Acheh *serambi* view showing its supported columns

4.4.10 MASJID SULTAN ABU BAKAR, JOHOR

Location:	Johor Bahru [93]
Date:	1893-1900
Condition:	Good
Original Patron:	Sultan Abu Bakar
Material:	Cement-rendered brickworks
Significance:	Historical: Sultanate Mosque
Stylistic Influence:	Colonial-European

Table 4-32 Masjid Sultan Abu Bakar background data

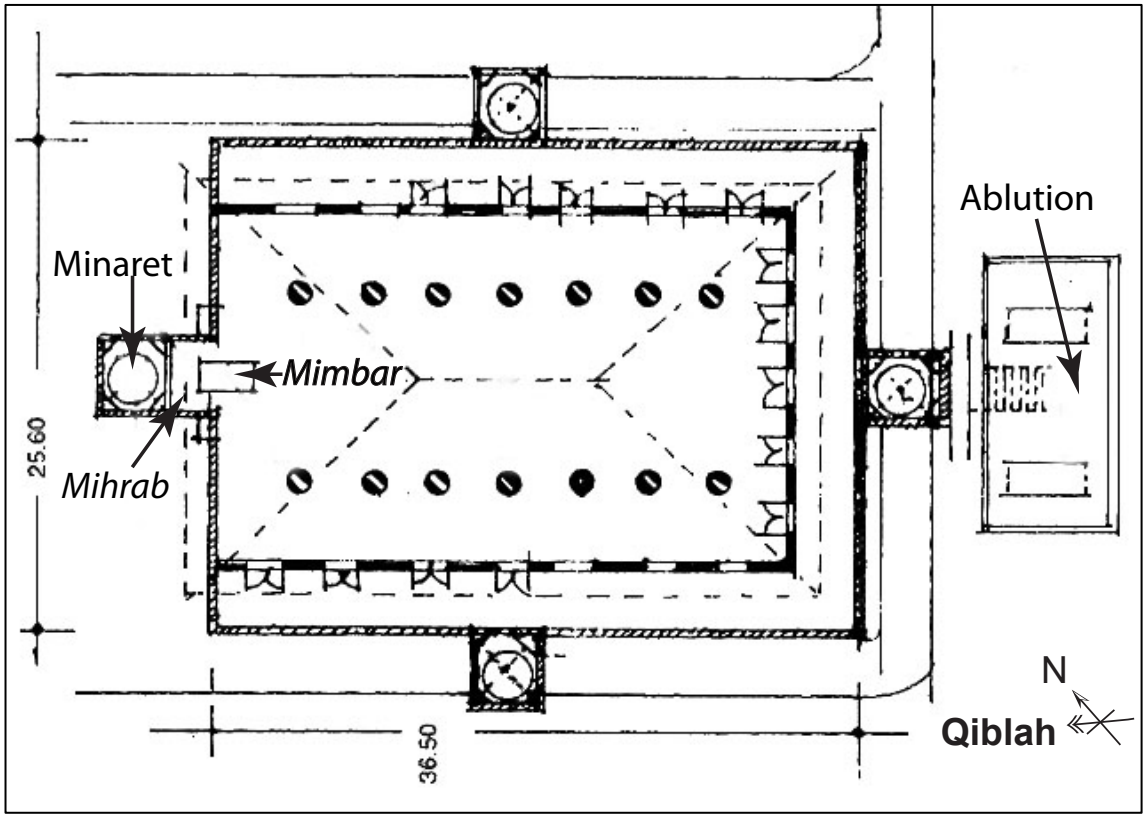
Figure 4-209 Masjid Sultan Abu Bakar exterior view

Masjid Sultan Abu Bakar takes after the name of its patron, the Sultan of Johor, Al-Marhum Sultan Abu Bakar. It is built at the top of a small hill Bukit Kechil, located by the side of Selat Tebrau, the narrow strait separating Johor and Singapore (Figure 4-209). The engineer responsible of the mosque was Datuk Yahya bin Awaluddin, with its

[93] Main information from (Abdul Halim, 2004) and '*Masjid Sultan Abu Bakar'*, publication on the history of the mosque by Information Centre of Masjid Sultan Abu Bakar

architect Tuan Haji Batuwif Haji Muhammad Arif bin Punak. It is able to accommodate 2500 people during congregational prayer.

There are three levels to the mosque. The sub-ground level is allocated for ablution and toilet facilities. The main prayer hall, a lecture theatre, a reading and multipurpose room; and the mosque administration are located on the raised ground level (Figure 4-210). The upper level is provided for women prayer area (Figure 4-211).



SOURCE: (ABDUL HALIM, 2004)

Figure 4-210 Masjid Sultan Abu Bakar floor plan layout.

The main hall is surrounded by *serambi* on its east and west. The *mihrab* is in the form of a rectangular niche with an arch-top entrance with decorative pilasters on its sides. The prayer hall is characterised by the rows of round fluted Corinthian columns forming colonnades to the sides of the prayer space near the side entry doors; defining the *qibla* axis with its focus towards the *mihrab* space (Figure 4-212). However, the *mimbar,* which is imported from Turkey and made of copper with decorative ironworks; sits in the middle of the haram which is defined by the three arches with colonnades, concealing the *mihrab* altogether (Figure 4-213). The mosque is built in neo-classical

repertoires, with fluted colonnades and arches, exhibiting direct Colonial-European architectural influence.

Figure 4-211 Interior view of Masjid Sultan Abu Bakar from its ablution area

Figure 4-212 Masjid Sultan Abu Bakar main prayer hall interior view.

Figure 4-213 Masjid Sultan Abu Bakar cast-iron *mimbar*

4.4.11 MASJID INDIA PERAK, PERAK

Location:	Ipoh, Perak [94]
Date:	1908
Condition:	Good
Original Patron:	Sheikh Adam
Material:	Cement-rendered brickworks
Significance:	Historical: community mosque belonging to South Indian Tamil Muslim community and constructed by workmen brought in from India
Stylistic Influence:	South Indian

Table 4-33 Masjid India background data

Figure 4-214 Masjid India exterior view

Masjid India Perak (MIP) was built in 1908 by a Tamil Indian Muslim known as Sheikh Adam who was the head of southern Indian community in Perak. He was a wealthy merchant who established the Kinta Ice Works and Kinta Aerated Water Factory. The mosque is located at Clayton Road, Ipoh, Perak. The Indian Muslims using

[94] Information from Arkib Negara Malaysia

this mosque are from the *madhab al-Hanafi*. The constructions of the mosque were carried out by a group of Indian workers.

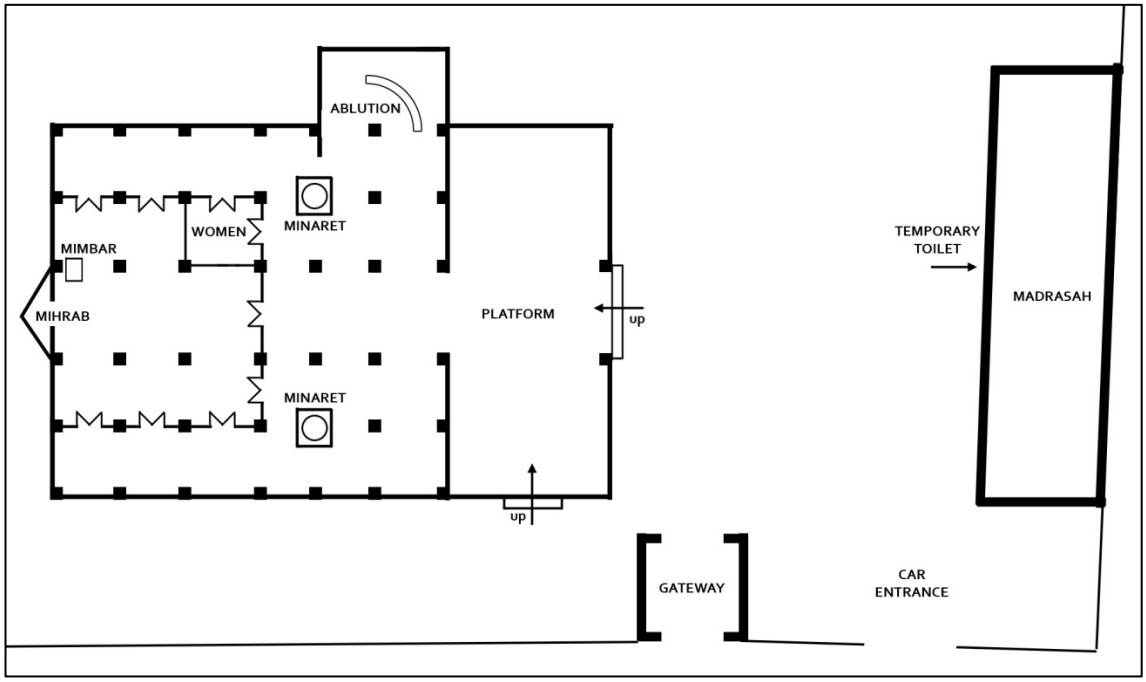


Figure 4-215 Masjid India site plan layout

Figure 4-216 Masjid India pointed archway gatehouse

The Southern Indian influence is evident in this mosque with multi-foil arches dominating the building façade (Figure 4-214). The entry to the mosque compound is marked by a gatehouse in the form of fortress design with pointed archway and crenelated parapet design with pierced works (Figure 4-216). A pyramidal roof structure covered the *haram* area, while the edges of the roof line are concealed with decorative pierced parapets with moulded battlements painted in green and white. Antefixes embellished the top part of the parapets, with small onion-shaped dome-like mouldings on small columns breaking up the antefix at regular intervals. The mosque has two slim and tall minarets, in the form of round based tower with decreasing diameter as it gets to the top. The top part is again decorated with onion-shaped dome with pointed top (Figure 4-217).

Figure 4-217 Masjid India exterior view from the main road

The main prayer hall is square in plan with four central columns supporting the pyramidal roof structure. Except for the *qibla* wall, all other walls have doors opening towards the adjoining *serambi* with the eastern *serambi* forming as the main entrance (Figure 4-218). The ablution area is attached to the building and located to the north-east of the prayer hall, near the main entrance. The minarets are accessible from the main *serambi* through spiral staircase. The *mihrab* is in the form of a niche in the *qibla* wall marked by a multifoil pointed arch doorway with golden pilasters by its sides. The

wooden *mimbar,* with an onion-dome covering its top, is placed to its right (Figure 4-219).

Figure 4-218 View of the *serambi* of Masjid India

Figure 4-219 Masjid India main prayer hall view showing the *mimbar* and *mihrab* wall

4.4.12 MASJID ZAHIR, KEDAH

Location:	Alor Setar [95]
Date:	1912
Condition:	Good
Original Patron:	Tunku Mahmud ibni Al-Marhum Sultan Tajuddin Mukarram Shah
Material:	Cement-rendered brickworks
Significance:	Historical: inspired by Masjid Azizi, Langkat
Stylistic Influence:	Mughal, Moorish, Colonial-European

Table 4-34 Masjid Zahir background data

Figure 4-220 Masjid Zahir exterior view

Masjid Zahir (MZ) is located at the corner of Jalan Kampung Perak and Jalan Pekan Melayu in Alor Setar, Kedah. It is a state and sultanate mosque as it is built near the compound of the royal palace by the side of Kedah River (Figure 4-220). MZ was built between 1912 and 1915, under the patronage of Sultan Tunku Mahmud ibni Al-Marhum Sultan Tajuddin Mukarram Shah. The mosque was inaugurated on a Friday 6th Zulhijjah 1333 A.H (15 October 1915) by Sultan Abdul Hamid Halim Shah, who then

[95] Information from Arkib Negara Malaysia

led the Friday prayers with Tunku Mahmud acting as the *khatib* on that day. It currently sits within the religious administrative complex of the state consisting of the *Syari'ah Courts* and Religious Affairs Department.

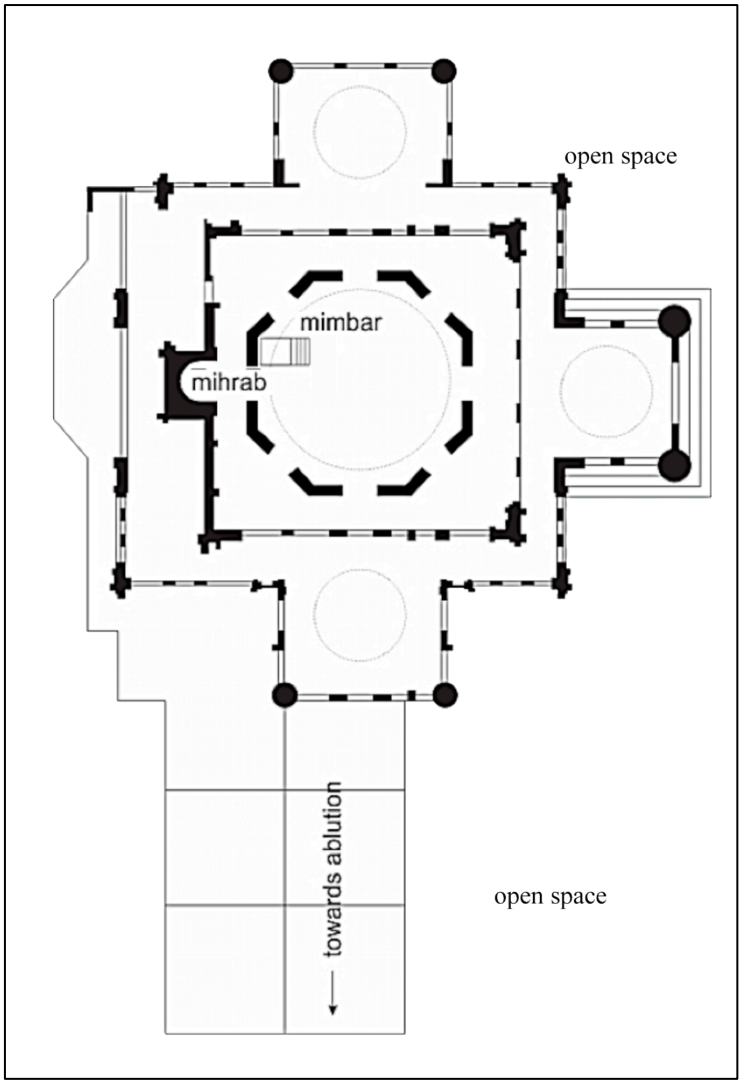


Figure 4-221 Masjid Zahir floor plan structure layout

Similar to Masjid Azizi, the interior of the mosque is dominated with an octagonal central space defined by crenelated horse-shoe arches sitting on columns with decorative pilasters creating doorways towards the centre space (Figure 4-221). The central-vertical axis is further enhanced by the exposure of the ceiling space underneath the central dome, with its blue and off white geometric composition forming a 16-pointed star. The arch on the western part leads to a niche with arched top and

muqarnas like decoration. The wooden *mimbar* has a dome top and is placed to the right of the *mihrab*, at the corner space between the arched doorways (Figure 4-222).

Figure 4-222 Masjid Zahir interior view from woman prayer area

MZ's architecture drew its inspiration from Masjid Azizi Langkat. The Mughal repertoire is evident in the onion domes and small minarets with dome tops decorating the roof tops. The mosque has a square plan prayer hall measuring 62 x 62 feet with protruding porches from each of the wall measuring 8 x 4 feet. These porches are adjoined by covered perimeter veranda surrounding the main prayer hall. On top of each porch is a dome, surrounding the central dome above the main prayer hall. The roof is ornamented with crenelated parapet with decorative corbel boards, rendered with mouldings and stuccos (Figure 4-223). A big open space covered with grass is provided in front of the mosque, separating it from the noisiness of the main roads.

Figure 4-223 Masjid Zahir exterior view showing its onion domes design

Figure 4-224 Masjid Zahir interior view of its *serambi*

Figure 4-225 Masjid Zahir main prayer hall interior showing its *mimbar* and *mihrab* wall

4.4.13 MASJID UBUDIAH, PERAK

Location:	Kuala Kangsar, Perak [96]
Date:	1913-14
Condition:	Good
Original Patron:	Sultan Idris Shah
Material:	Cement-rendered brickworks
Significance:	Historical: Masjid 'Nazar'; a mosque built fulfilling the pledge of the Sultan if he was cured from his illness
Stylistic Influence:	Mughal, Moorish, Colonial-European

Table 4-35 Masjid Ubudiah background data

Figure 4-226 Masjid Ubudiah exterior view

Masjid Ubudiah (MU) was built by Sultan Idris Shah of Perak in the year 1913-1914 with the planning done by Colonel Huxley, designed by Hubback and engineered by Caufield. These three individuals were the appointed team members from the Public Works Department which was set up during British rule in the Malay Peninsula. The mosque is also known as *Masjid Nazar* - *nazar* meaning pledge – as it is said that the Sultan pledged that he would build a mosque if he was cured from his illness.

[96] Information from (Gullick, 2000) and information booklet of Masjid Ubudiah

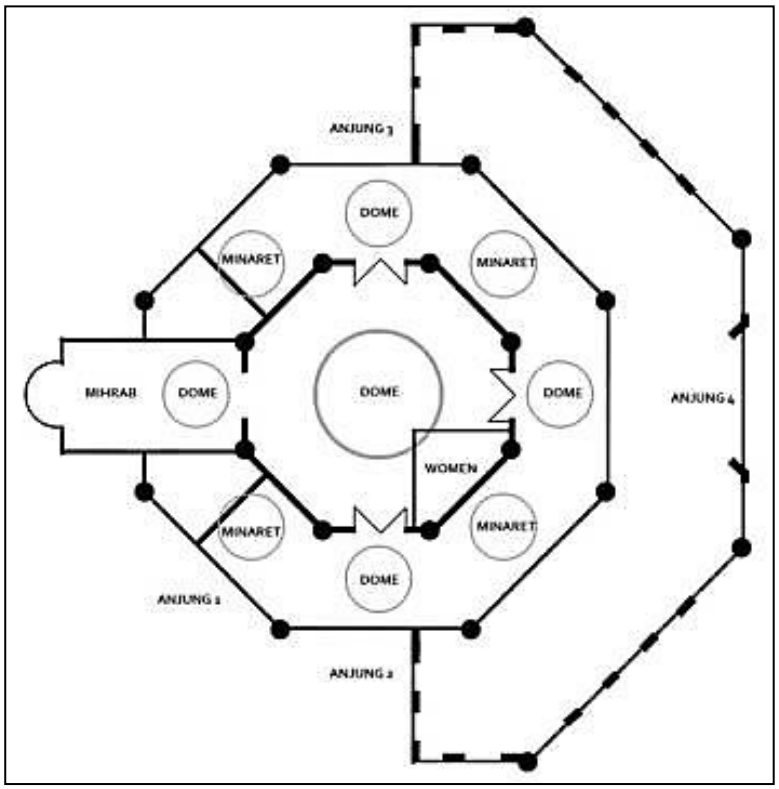


Figure 4-227 Masjid Ubudiah octagonal floor plan structural layout

Figure 4-228 Masjid Ubudiah big central dome painted in gold covered the octagonal space with outer smaller domes covering the protruding porches

MU is located on top of Bukit Chandan, close to the royal mausoleum and the palace complex. It has an octagonal floor plan, with protruding porches from all elevations and covered verandas connecting these porches (Figure 4-227). A big central dome painted in gold covered the octagonal space, with outer smaller domes covering the protruding porches. Between the outer domes are the four main minarets with octagonal bases and banded bodies with marbles, finished on the top with octagonal plates serving as the base for onion-shaped gold dome tops (Figure 4-228).

Figure 4-229 The western porch with horse-shoe arch marking its entrance

The British' Indian-Mughal and Spanish-Moorish experimentations are evident in this mosque. It is rich with crenelated parapets with moulded bands; arches supported by brackets, horse-shoe and 'Moorish' arches forming colonnades to the covered veranda, and small pointed ornamental minarets enhancing the features of the roof lines (Figure 4-228 and 4-229). Inside, the *mihrab* is formed out of the western porch with horse-shoe arch marking its entrance. A simple wooden *mimbar* with golden onion-dome top is located to the right of the *mihrab* (Figure 4-230). The mosque is built in Italian marble all throughout.

Figure 4-230 The *mihrab* formed out of the western porch with horse-shoe arch marking its entrance. A simple wooden *mimbar* with golden onion-dome top is located to the right of the *mihrab*

4.4.14 MASJID PALOH, PERAK

Location:	Ipoh, Perak [97]
Date:	1912
Condition:	Good but lack of maintenance
Original Patron:	Orang Kaya-kaya Dato' Adika DiRaja Wan Mohamed Saleh
Material:	Cement-rendered brickworks
Significance:	Historical: Kampung Paloh was the first Malay settlement in the new British create town Ipoh
Stylistic Influence:	Regional-vernacular, Colonial-European

Table 4-36 Masjid Paloh background data

Figure 4-231 Masjid Paloh exterior view from the main road

Masjid Paloh (MP) was built in 1912 by Orang Kaya-kaya Dato' Adika DiRaja Wan Muhammad Saleh, who served as a tax collector during Frank Swettenham's residency in Perak. It was constructed on a site by the Kinta River, within the community of Kampung Paloh which was the first Malay settlement in Ipoh.

[97] Information from Arkib Negara Malaysia and Abdul Halim (2004).

The mosque complex consists of the main prayer hall with surrounding verandas, an ablution facility and water pool to the south-east of the prayer hall near the main entrance; a square-based minaret located to north-east and currently joined to the main mosque structure by the roofs of the veranda; *Madrasah Sharifah* – a religious school – to the east of the mosque complex near the main entrance; cemetery forming part of the mosque's landscape on the southern compound; and the covered tomb-house belonging to Wan Muhammad Saleh, his wife and child (Figure 4-232 and 4-233).

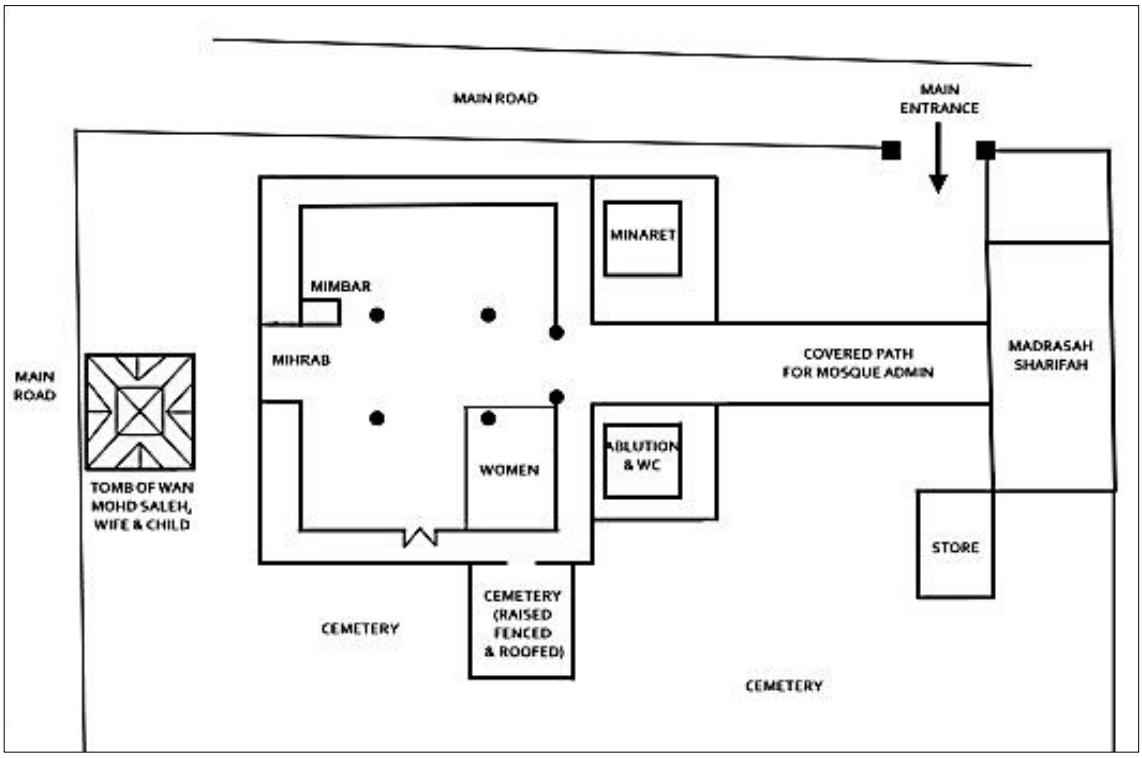


Figure 4-232 Masjid Paloh site plan layout

Figure 4-233 The covered tomb-house belonging to Wan Muhammad Saleh, his wife and child

MP is a three-tiered pyramidal roof built in cement rendered bricks. Both the minaret and the tomb house also have pyramidal roofs (see Figure 4-231). The two level *madrasah* was built by a lady known as Toh Puan Sharifah Rodhiah, however it is currently in a dilapidated state and is not in use (Figure 4-234). The mosque although structurally maintained, seems messy during the visit and is well under-used.

Figure 4-234 Madrasah Sharifah, located to the east of the mosque complex near the main entrance

Figure 4-235 Masjid Paloh main prayer hall interior view showing its *mimbar* and *mihrab* wall

Figure 4-236 Cemetery forming part of the mosque's landscape on the southern compound

4.4.15 MASJID KAPITAN KELING, PULAU PINANG

Location:	Lebuh Pitt, Pulau Pinang[98]
Date:	Original building late 18th century; current building 1918
Condition:	Good
Original Patron:	Caudeer Mohuddeen (late 18th century)
Material:	Original building: timber with attap roofing; Current: Cement-rendered brickworks
Significance:	Historical: Community mosque of South Indian Muslim workers brought by British administration
Stylistic Influence:	Indian, Moorish, Classical architecture

Table 4-37 Masjid Kapitan Keling background data

Figure 4-237 Masjid Kapitan Keling exterior view

Masjid Kapitan Keling (MKKP) was originally built in the late 18th century by Caudeer Mohudeen. He was the Kapitan for the Keling (South Indian) community, from which the mosque gets its name. The history of the building of the original mosque was recorded in the handbook on Muslim Trusts (1904) whereby the East India Company's Troops stationed in Penang, and made up of the Havildars, Jemadars and Sepoys

[98] Main information from handout 'Kapitan Keling Mosque' produced by Information Centre of Masjid Kapitan Keling

"cleared a piece of land and erected an attap mosque on a portion of it and used another part as a burial ground".

In 1801, the Leith administration appointed Cauder Mohideen as the Captain of the South Indian community and granted – on behalf of the East India Company – the building of the "Mohammedan Church" on a piece of land on the southern side of Malabar Street (currently Chulia Street). MKKP was however drastically refurbished and replaced by 1918. It is currently a complex made up of the main prayer hall with veranda to its north and south; water pool for ablution to the north and south of the main prayer hall (Figure 4-240); toilet facilities in a separate building to the north of the mosque's compound; the *madrasah* of *Anvarul 'Ulum* to its north-west; a group of Islamic shop lots to its west (Figure 4-239)

Figure 4-238 Cemetery that can be found around the mosque compound

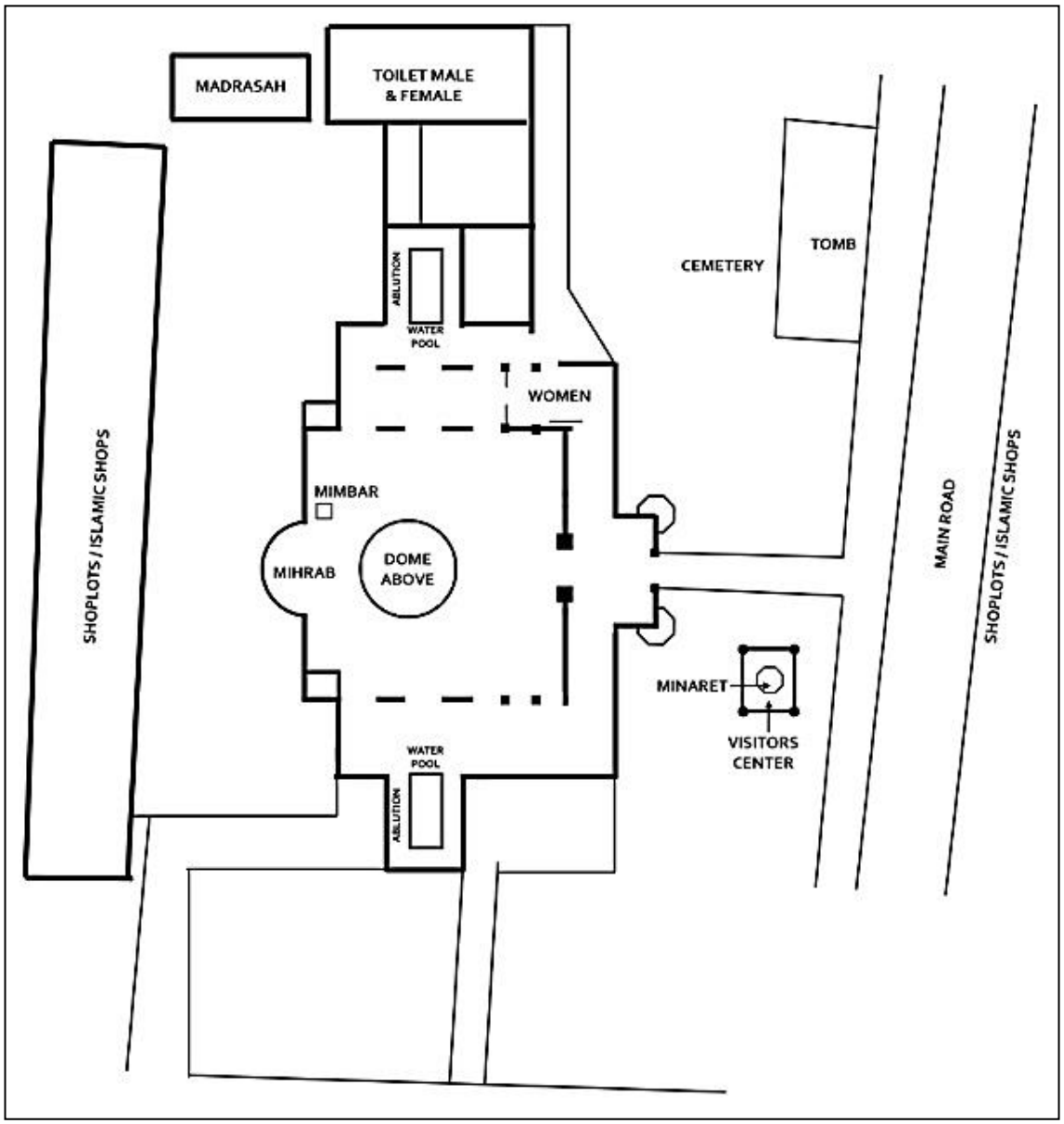


Figure 4-239 Masjid Kapitan Keling site plan layout

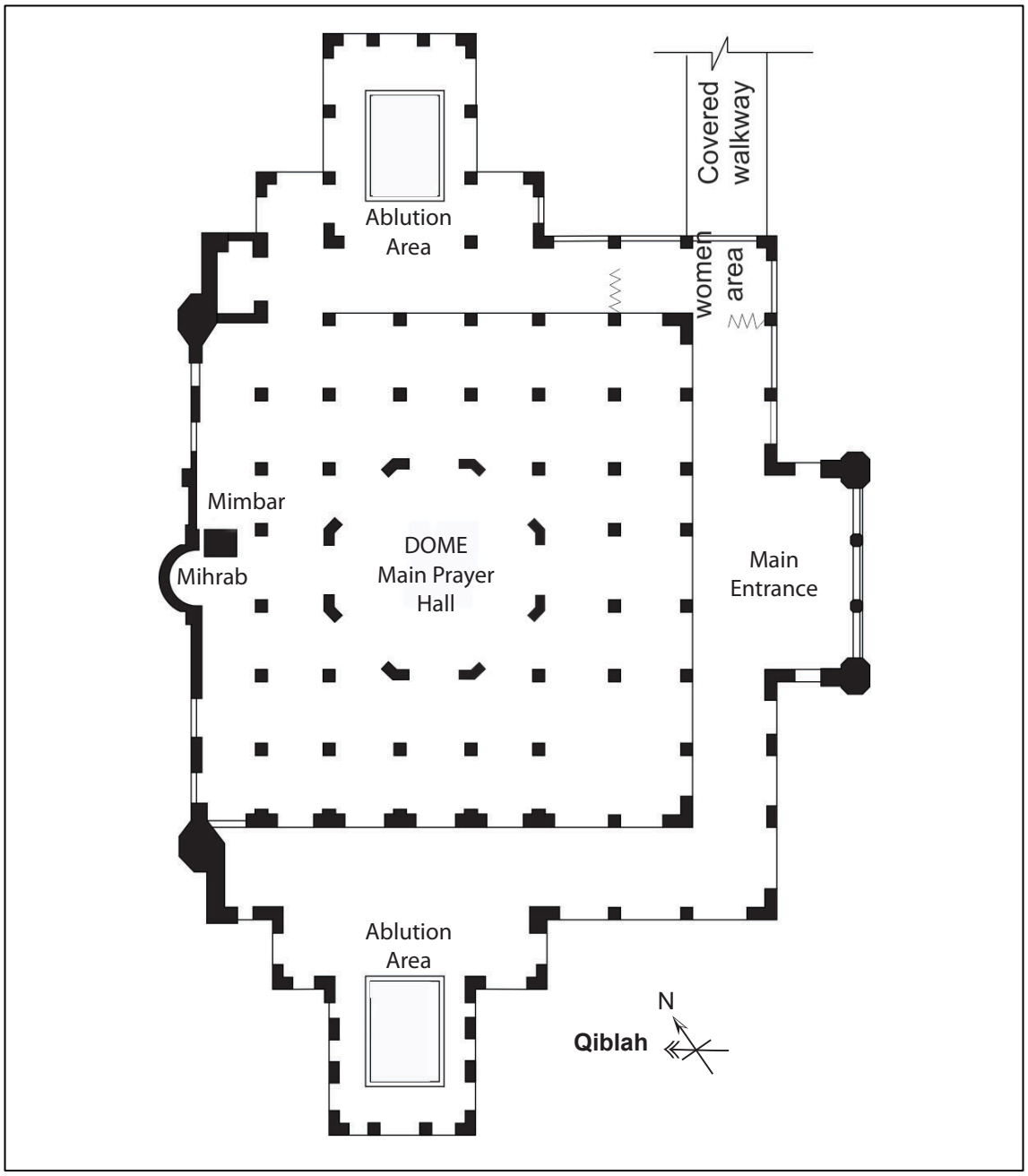


Figure 4-240 Masjid Kapitan Keling floor plan

The octagonal base minaret sits on a fort-like cum gate-house foundation with decorative minarets on its four corners The minaret was completed in 1916 and erected by the Endowments Board from the funds of the mosque. A slab inscription found at the base of the minaret listed the names of the people behind the construction of the mosque; W. Peel (President), H. C. Sells (Secretary); Committee Management team made up of Shaikh Ismail, Haji Yahya Khatib, N.A. Neubronner F.R.I.B.A. Architect; and the foundation stone was laid by Haji Abdullah Imam (Figure 4-241).

A rich vocabulary of Indian-Moorish and Classical Architecture repertoire is found employed in the design scheme. Arches, colonnades, crenellated parapet supported on decorative brackets, minarets and domes of various sizes are identifying elements of the British Colonial architecture language of the period. There are at least seven types of arch forms found in the mosque; Moorish multifoil, horseshoe, ogee, lancet, triple-foil and fanlight arches forming doorways and colonnades in the mosque's design (Figures 4-242 and 4-243).

Figure 4-241 The octagonal base minaret sits on a fort-like cum gate-house

Figure 4-242 Exterior view of Masjid Kapitan Keling

Figure 4-243 Masjid Kapitan Keling main prayer hall dome interior view

4.4.16 MASJID BATAK RABIT, PERAK

Location:	Teluk Intan, Perak
Date:	Original: unknown; current building: 1885
Condition:	Good
Original Patron:	Laksamana Tok Tambah
Material:	Original: timber construction; Current: Cement-rendered brickworks
Significance:	Historical: Batak Rabit, previously known as Kampung Laksamana was originally a fort and believed to be the administration centre of Sultan 'Abdullah Muhammad Shah II; and Laksamana Tok Tambah was his royal comrade
Stylistic Influence:	Local vernacular

Table 4-38 Masjid Batak Rabit background data

Figure 4-244 Masjid Batak Rabit exterior view from the main road.
This mosque is currently located on the main road between Lumut and Teluk Intan, Perak

Masjid Batak Rabit (MBR) is believed to have been built by Laksamana Tok Tambah, a royal comrade of Sultan Abdullah Muhammad Shah II (r. 1874-1871), and a man of immense wealth[99]. It is located close to the river bank, and currently placed by the side of Jalan Maharaja Lela (Figure 4-244). It is unknown when the mosque was originally constructed; however it was built in wood as part of Sultan Abdullah's fort

[99] Main information of this mosque taken from http//:sembangkuala.wordpress.com/2011/07/15/batak-rabit. This website is owned by Raja Mariam Raja Mohamed Iskandar, who claims to be the great granddaughter of the late Sultan Abdullah Muhammad Shah II

complex. However, in 1885 the walls of the wooden mosque were replaced with cement-rendered brick works.

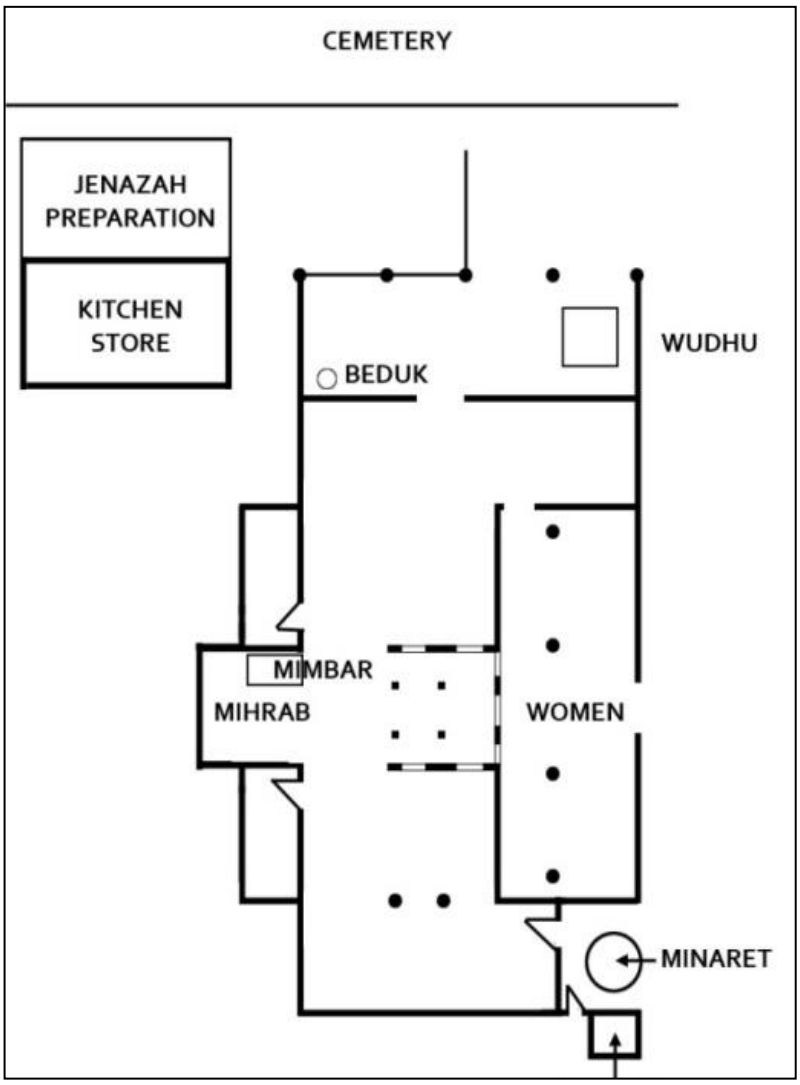


Figure 4-245 Masjid Batak Rabit rectangular floor plan layout

MBR is a beautiful small mosque with rectangular floor plan and three tiered pyramidal roof currently covered in asbestos (Figure 4-245). The round-based minaret is located to its southeast and has a pointed roof covered with clay tiles. Based on study of the floor plan, the mosque is believed to have been extensively renovated and enlarged. Currently the main pillars supporting the pyramidal roof can still be seen from the interior space (Figure 4-245 and 4-246). The *mihrab* of this mosque is made by protruding central part of the western wall. The interior is plain with almost no decorations. The wooden *mimbar*, which looks relatively recent, is placed in the space extended for the *mihrab* (Figure 4-238).

Figure 4-246 Main pillars supporting the pyramidal roof

Figure 4-247 *Mihrab* and *mimbar*

MBR is currently located by the busy road of a locality that is dominated with industrial buildings such as workshops and factories. However, its placement by the river confirms the traditional typology of a local mosque. An old cemetery is located to the north of the mosque, which is believed to be a burial ground for Laksamana Tok Tambah and his family members (Figure 4-248).

Figure 4-248 Cemetery located to the north of the main prayer hall

4.4.17 MASJID (SURAU) TOK JANGGUT, KEDAH

Location:	Langgar, Kedah
Date:	Late 19th or early 20th century
Condition:	Fair, risk of dilapidation if not properly conserved
Original Patron:	unknown
Material:	timber construction
Significance:	Architectural: a rare wooden mosque built in vernacular house typology, with more than 10 panels of decorative woodcarving
Stylistic Influence:	Local vernacular

Table 4-39 Masjid Tok Janggut background data

Figure 4-249 Masjid Tok Janggut exterior view

Surau Tok Janggut (STJ) is a small village mosque which was built by the kampong people in Langgar, Kedah. The original builder or patron is unknown; as the study could not find any data pertaining to the history of the mosque.

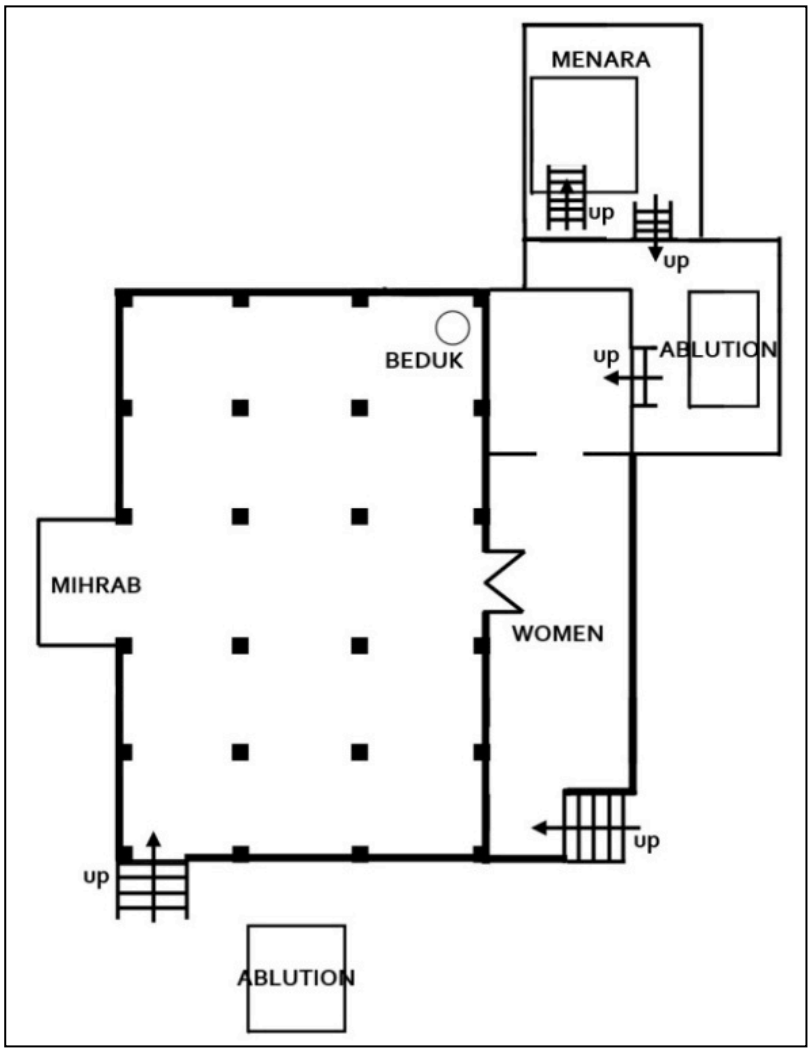


Figure 4-250 Surau Tok Janggut: floor plan

Figure 4-251 View from across the adjacent river

However, its unique architecture and typology; deserves some attention as without proper maintenance it is at risk of being dilapidated and abandoned – similar to many wooden mosques of the Malay Peninsula. STJ is built in the typology of the Malay house with cross gable and gable on hip construction, by the side of a river (Figure 4-251). The structural system allows for the walls to be non-loadbearing and the wall panels have woodcarving panels with decorative motifs of calligraphy, meandering tendrils, floral and vegetal as well as stylised zoomorphic objects (Figures 4-252, 4-253 and 4-254).

Figure 4-252 Woodcarving panel with floral and calligraphy motifs

Figure 4-253 Woodcarving panel: calligraphy arranged within abstracted floral-vegetal arrangement

Figure 4-254 Woodcarving panel using relief technique, at the bottom part of a window

Figure 4-255 Entrance to *serambi* near the foot of the minaret

The ablution area with water pool is located to the north-east and the south of the prayer hall, with the eastern *serambi* utilised for women prayer area. A *beduk* is located at the foot of the minaret (Figure 4-255). The minaret is located to the north of the main prayer hall. It has a square base which at the middle is reduced to become an octagonal with pointed dome top (Figure 4-256). The mosque has no *mimbar,* as it is not used for Friday prayers. The *mihrab* is in the form of protruding feature of the *qibla* wall forming a rectangular space where the *imam* stands in prayer (Figure 4-257).

Figure 4-256 The wooden minaret

Figure 4-257 Interior of Surau Tok Janggut.
The small rectangular extended space to the left is the *mihrab*

4.4.18 MASJID PANGLIMA KINTA, PERAK

Location:	Ipoh, Perak
Date:	1898
Condition:	Well mantained
Original Patron:	Dato' Panglima Kinta Muhammad Yusuf
Material:	Cement-rendered brickworks
Significance:	Historical: First mosque built in Ipoh
Stylistic Influence:	Indian-Mughal, Neo-classical

Table 4-40 Masjid Panglima Kinta background data

Figure 4-258 Masjid Panglima Kinta exterior view

Masjid Panglima Kinta (MPK) was built in 1898 by Dato' Panglima Kinta Muhammad Yusuf, who was the territorial chief of Kinta – the tin mining valley – who transformed Ipoh from a small village to the largest town in Kinta Valley throughout his career from 1884 until his death in 1903[100]. It was the first mosque to be built in Ipoh

[100] Information from www.ipohworld.org

and the *Madrasah Kamaliah*, which is an Arabic-medium religious school attached to the mosque, was the first school type to be built in the city.

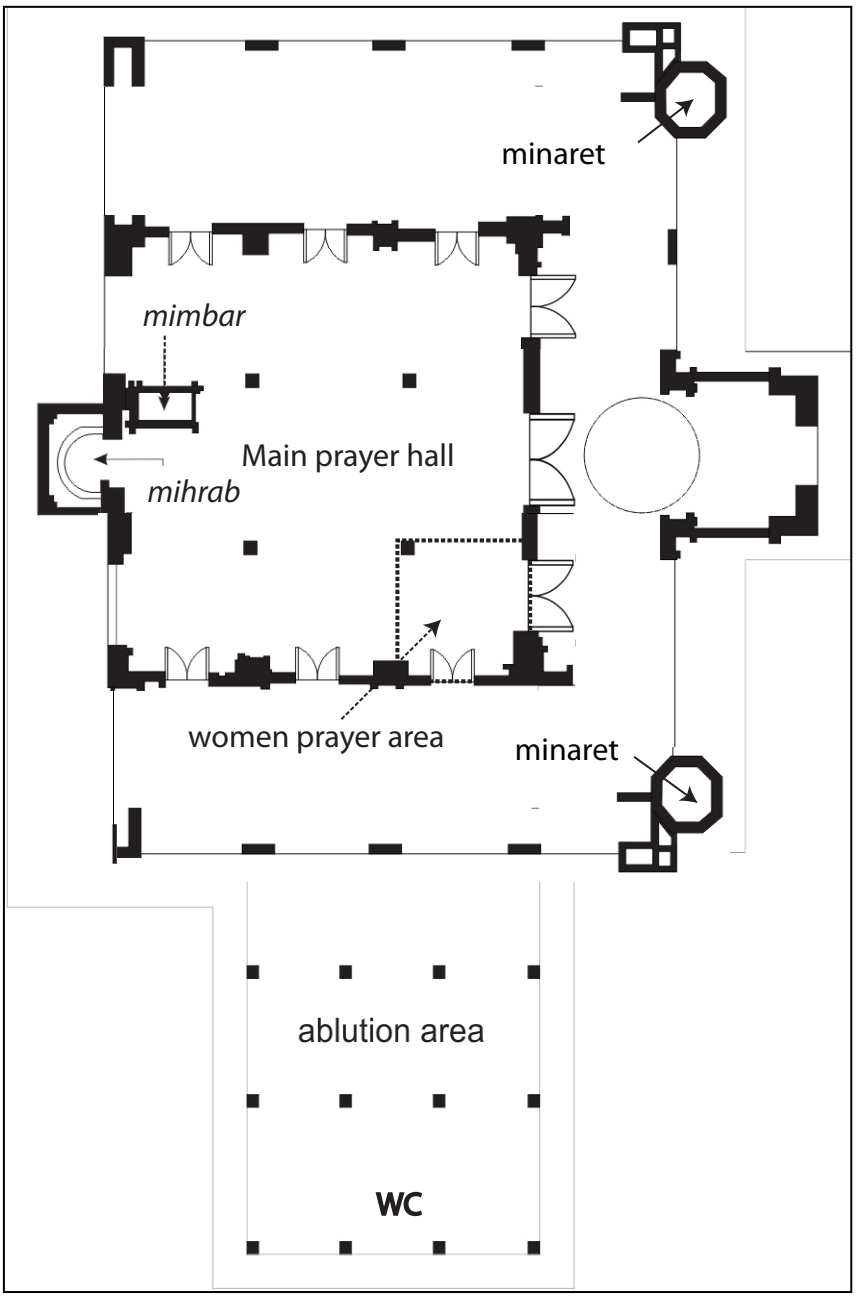


Figure 4-259 Masjid Panglima kinta site plan layout

The mosque complex is made up of the main prayer hall with the ablution and the toilet area to its south; two octagonal-base minarets are placed at the north-east and south-east corners of the building on the entrance façade (Figure 4-259). The tomb house of Muhammad Yusuf family members are located to the south-east of the mosque

compound; with an open cemetery placed to the south (Figure 4-260). *Madrasah Kamaliah,* is located outside of the mosque's fence to its east.

MPK displays a hybrid architecture consisting of neo-classical building grammar with a mix of South Indian and Mughal architectural language. The building materials are mainly rendered brickworks ornamented with crenellated roof trims with corbels; horizontal mouldings and arched lining cornices. There are two types of roof forms employed; pyramidal roof covers the prayer areas in front of the *mihrab*; while the dome covers the central space of the prayer hall. These architectural features however are not visible from inside the prayer hall (Figure 4-261). Characteristic of Colonial architecture of this period, the mosque has more than one type of arch form, with the horseshoe arch on straight piers and pilasters on both sides forming colonnades for the building facade.

Figure 4-260 Tomb house belonging to the family members of Muhammad Yusof

Figure 4-261 Masjid Panglima Kinta prayer hall

4.4.19 MASJID LANGGAR, KELANTAN

Location:	Kota Bharu[101]
Date:	1870
Condition:	Enlarged a few times, original form maintained
Original Patron:	Sultan Muhammad II
Material:	Wood
Significance:	Historical: Built next to Kelantan Royal Mausoleum Architectural: Wooden architecture built in Malay house prototype
Stylistic Influence:	Local Vernacular

Table 4-41 Masjid Langgar background data

SOURCE: (ABDUL HALIM NASIR,2004).

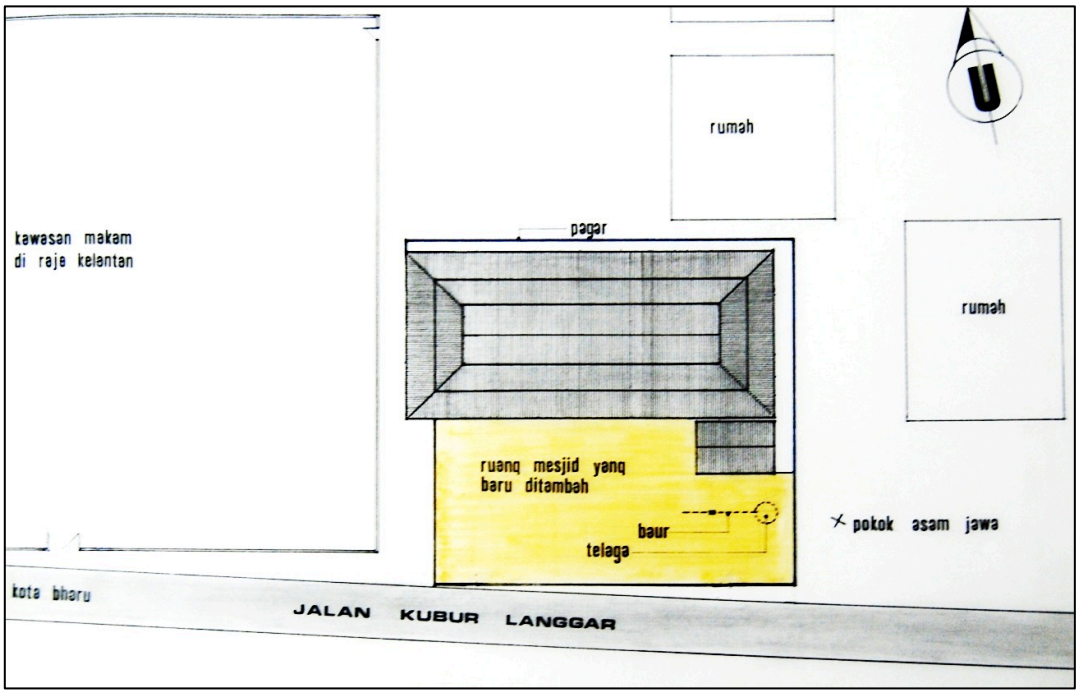
Figure 4-262 Old photograph of Masjid Langgar.

According to an inscription found on a wood carved panel of the mosque, Masjid Langgar (MLK) was built in 1291 H/ 1871 C.E. during the rule of Sultan Muhammad II. It is located next to the Royal Mausoleum at Langgar, Kota Bharu in Kelantan. This old mosque has been extended to the south to incorporate a completely

[101] Information gathered mainly from (Abdul Halim, 2004) and (Tajuddin Rasdi & Alice Sabrina 2003);

http://ewarisan-portal.creativista.com.my/en/pdf/About%20Masjid%20Langgar.pdf; and Perbadanan Muzium Negeri Kelantan (1996), *Warisan Kelantan XV*, pp. 134-5.

new building of cement rendered brick construction. Currently, the new mosque is more recognised as Masjid Langgar, overshadowing the old structure (Figures 4-263 and 4-264).



SOURCE: KALAM

Figure 4-263 Masjid Langgar site plan layout.

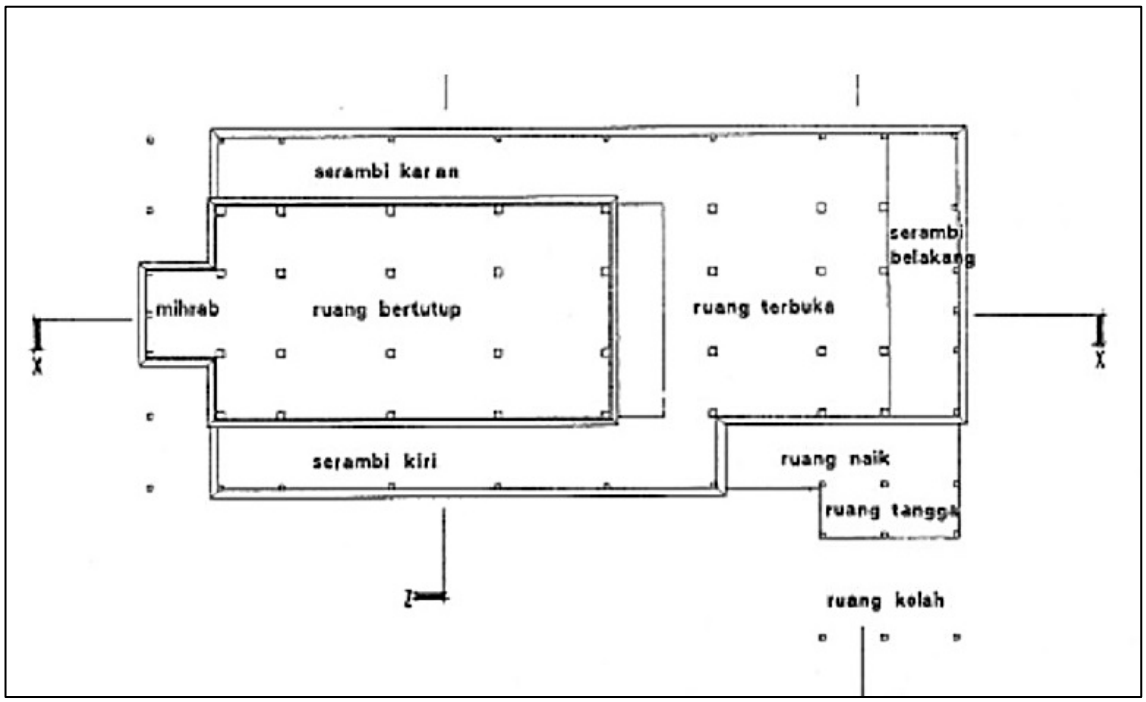
SOURCE: (HTTP//:MYMASJID.PHOTO-DIGITAL.ORG)

Figure 4-264 New building concealing the old Masjid Langgar Kelantan.

SOURCE: (HTTP//:RAYKINZOKU.FOTOPAGES.COM)

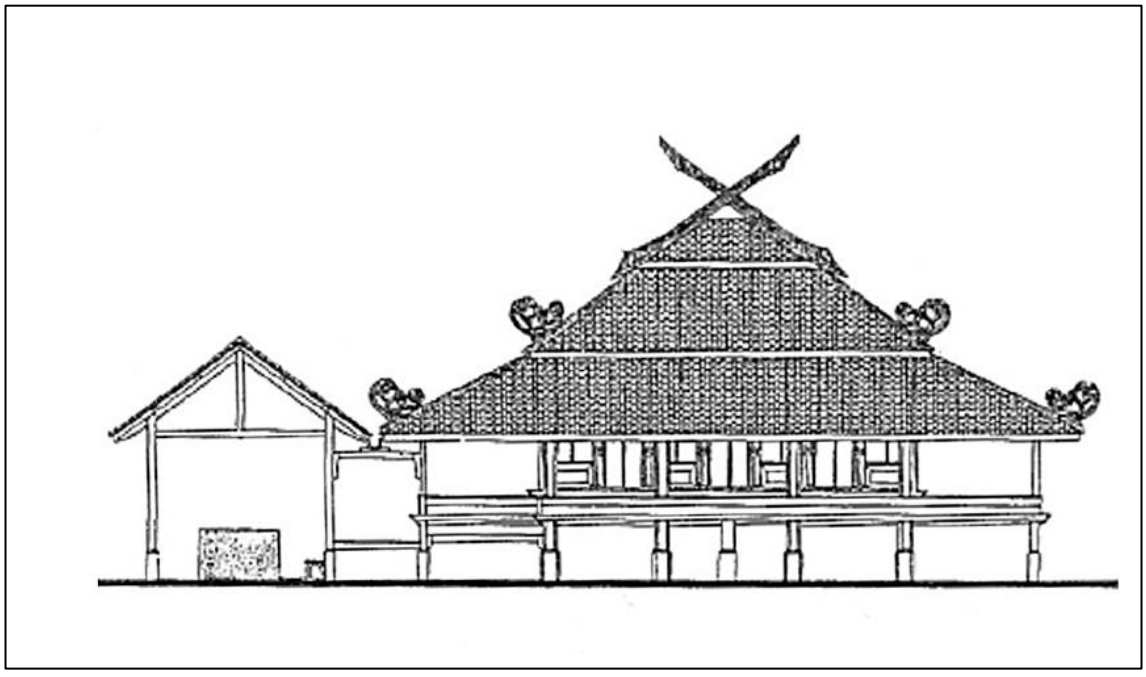
Figure 4-265 Masjid Langgar seen from the mausoleum.

MLK is built in the distinctive Kelantan traditional architectural style, with three-layered long-roofs covering the floor space. The original base of the mosque is of 24 meters by 7 meters in dimension. The *serambi* of the mosque is an extension from the original plan. It is built surrounding the main prayer hall, with a lowered floor level. The building has 32 main pillars; 16 *"tiang panjang*" (main pillars) and 16 *"tiang serambi*" (auxiliary pillars). With the extension of the *serambi*, the overall floor area increased to be 29 meters by 24 meters (Figure 4-266 to 4-268).



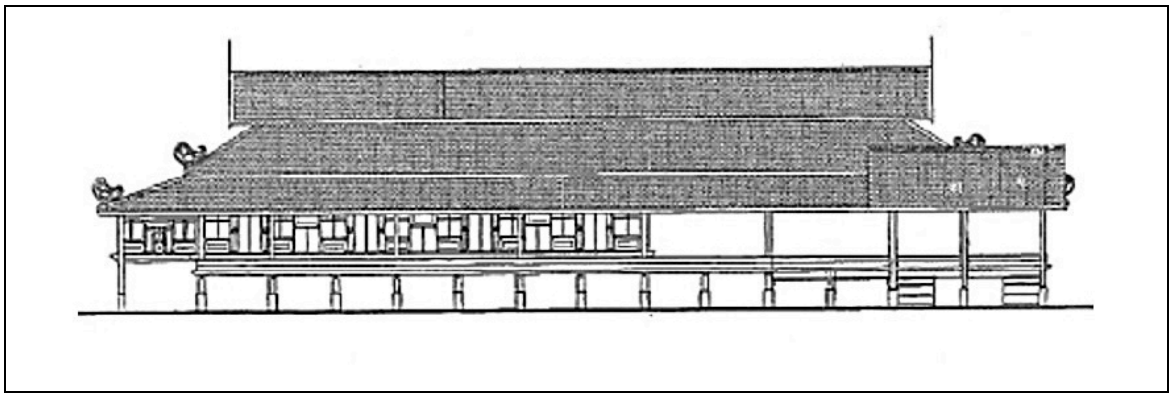
SOURCE: KALAM

Figure 4-266 Masjid Langgar original floor plan layout.



SOURCE: KALAM

Figure 4-267 Masjid Langgar east elevation drawing.



SOURCE: KALAM

Figure 4-268 Masjid Langgar south elevation drawing, after extension.

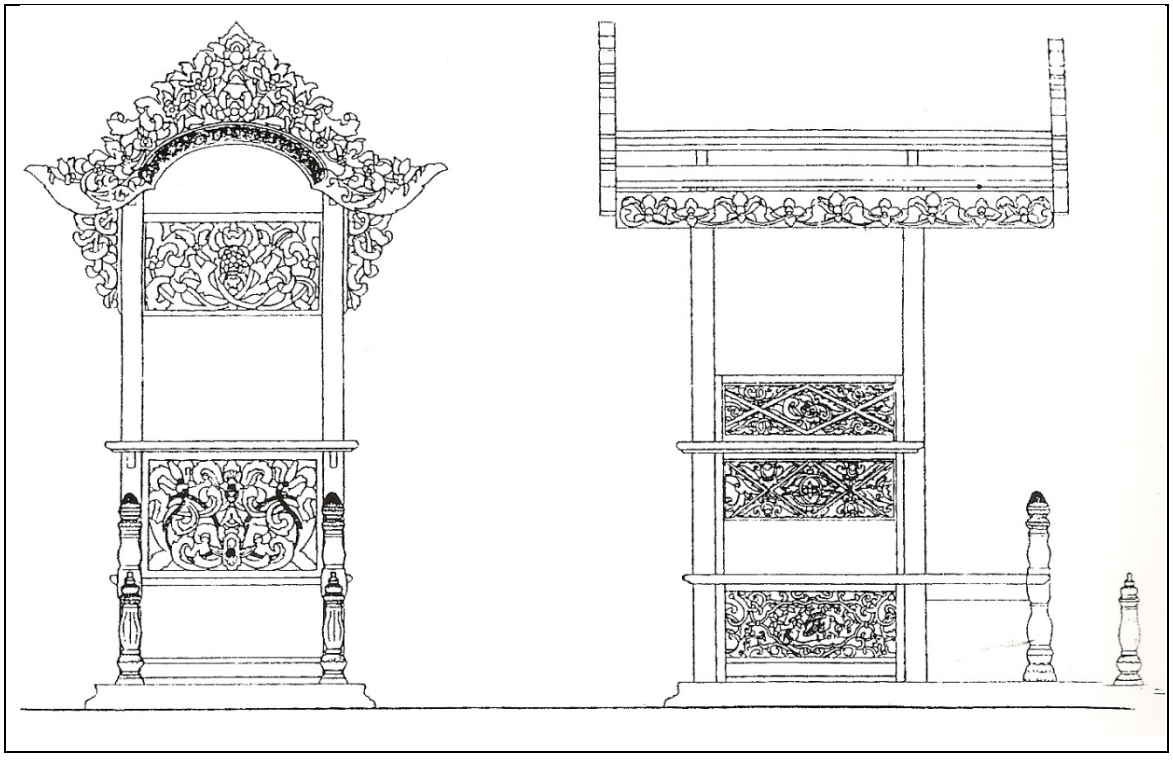
The interior of the mosque is divided into two main areas; the core and the 'open space'. The core is raised about 350 mm from the surrounding 'open space', and was historically dedicated for the use of royal family members (Figure 4-269). The *mihrab* is made by an extended space on the western wall made by the protruding structure that could be seen from outside. The *mimbar*, which is delicately carved with elegant floral motifs, is currently kept at Kandis Center in Kelantan (Figures 4-270 and 4-271).

SOURCE: (HTTP//:RAYKINZO.FOTOPAGES.COM)

Figure 4-269 The core of the mosque.

SOURCE: (FARISH A.NOOR & EDDIN, 2003)

Figure 4-270 Details of the *mimbar's gunungan*.



SOURCE: ROSNAWATI OTHMAN, KANDIS RESOURCE CENTRE

Figure 4-271 Masjid Langgar *mimbar* drawing

5 VISUAL ANALYSIS AND MOSQUE TYPOLOGICAL STUDIES

5.1 Introduction

Mosques selected for detailed analysis are subjected to typological studies, consisting of both analytical and generative aspects (Leupen, 1997, pp. 132–9). By using the *Building Survey Form,* the physical attributes of each mosque are recorded, thereby extracting critical design data that are consequently populated in search for emerging patterns. The purpose of this exercise is three tiered. The first is to analyse various elements of the design components, thereby providing the present study with the compositional attributes of mosques in Island Southeast Asia. The second objective is to chart the morphological changes of the mosque idioms. This is achieved by arranging the mosques into chronological periods of 15th–16th century, 17th–18th century and 19th – 20th century, and analysing the changes in material and building components.

The third objective is to identify existent typological ranks within the mosque. The patterns emerging from populated data will allow identification of mosques that share similar 'formal structures' (Moneo, 1978, pp. 23–4). These mosques will then be grouped into clusters of mosque types characterised by similar physical attributes. The classifications of mosques into different groupings will unlock design parameters for each type discovered.

In order to successfully achieve these objectives, a requisite generalisation is preliminarily implied on the mosques. They are examined as *a distinctive building type* with defined characteristics regardless of age, geographical location and cultural backgrounds. The focus of physical analyses of the building attributes will be directed towards two aspects: architectural qualities and spatial design. The physical attributes of the mosques, such as architectural elements, structural elements and constructional materials will provide critical design data in terms of mosque typology (i.e., typology by form), prevalent technology, labour and economics, taste and stylistic inclination of a certain period.

On the other hand, critical analysis on the spatial design of the mosques incorporates examination of the mosques' site layouts and interior spatial planning. The parameters retrieved will provide 'unconscious' design data on the functions of a

mosque, as well as design thinking underlying the creative process (Grabar, 1978, p. 14). The outcome is in the form of unique data that highlights the dominant mosque types based on functions (i.e., typology by function).

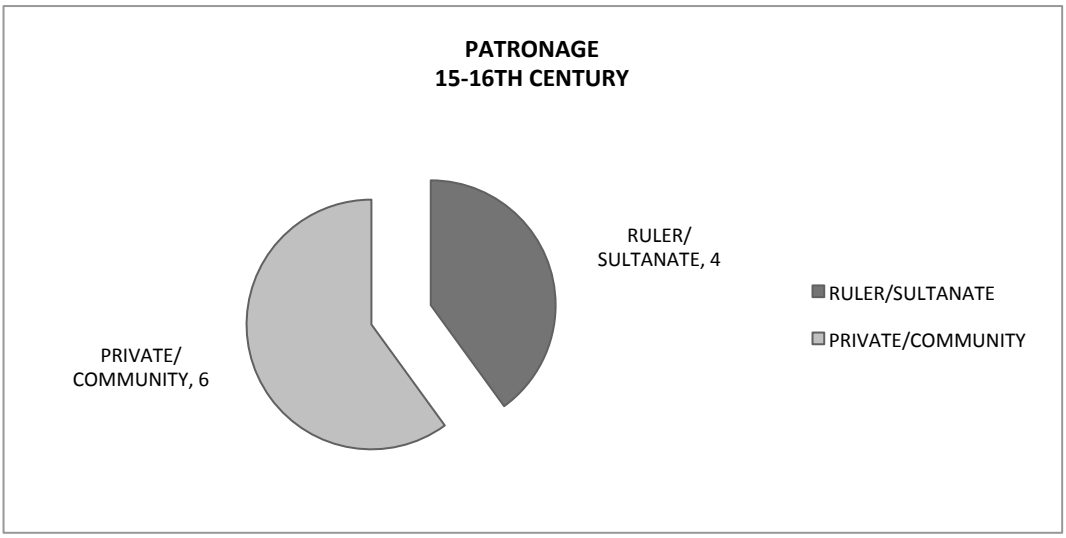
The analysis will enable the present study to detect critical stages of when (and where) mosque idioms began to experience drastic transformations. From the results of the analysis, the study will attempt to seek explanations for the emergence of distinctive patterns, or lack thereof. In this study, mosques will be analysed according to nine typological levels: mosque's patronage, site placement, site design, approach and accessibility, functional spaces, formative aesthetics, stylistic influence, material aesthetics and decorative elements.

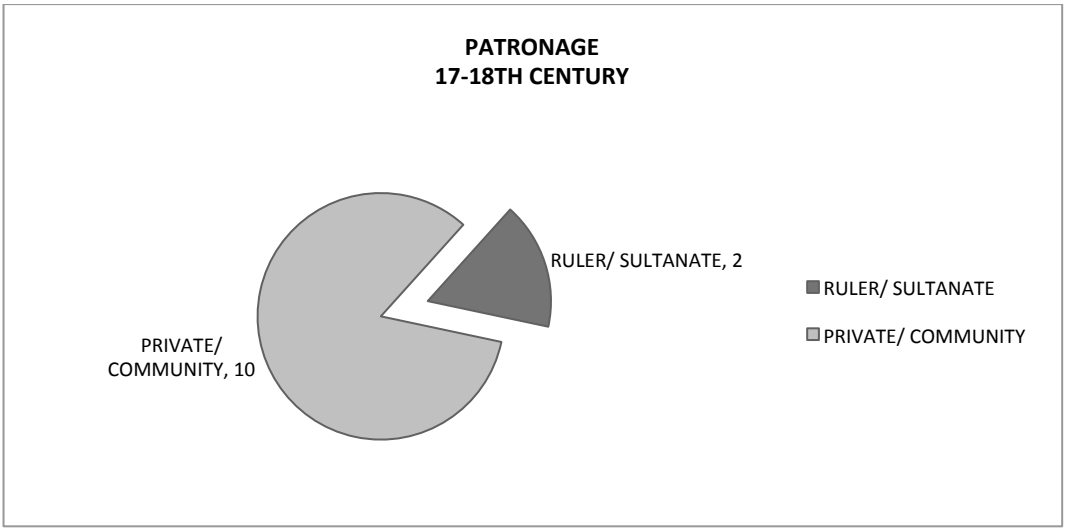
5.2 Typological Analysis

5.2.1 Mosque Patronage

PERIOD	REF	REGION	MOSQUES	PATRONAGE	
				RULER/ SULTANATE	PRIVATE/ COMMUNITY
15-16TH CENTURY	1	East Java	Sunan Ampel		1
	2	East Java	Sendang Duwur		1
	3	East Java	Sunan Giri		1
	4	Central Java	Mantingan	1	
	5	Central Java	Kudus		1
	6	Central Java	Demak	1	
	7	West Java	Agung Banten	1	
	8	West Java	Cirebon Kasepuhan	1	
	9	West Java	Panjunan		1
	10	Nusa Tenggara	Bayan Beleq		1
17-18TH CENTURY	11	Batavia/Jakarta	Kebon Jeruk		1
	12	Batavia/Jakarta	An-Nawier		1
	13	Batavia/Jakarta	Al-Mansur		1
	14	Batavia/Jakarta	Kg Baru		1
	15	Nusa Tenggara	At-Taqwa	1	
	16	Sulawesi	Palopo		1
	17	Patani	Teluk Manok		1
	18	Malay Peninsula	Tengkera		1
	19	Malay Peninsula	Kg Hulu		1
	20	Malay Peninsula	Kg Laut		1
	21	Malay Peninsula	Kg Keling		1
	22	North Maluku	Masjid Sultan Ternate	1	
19-20TH CENTURY	23	Batavia/Jakarta	Langgar Tinggi		1
	24	Batavia/Jakarta	Al-Makmur Cikini		1
	25	Surakarta	Agung Surakarta	1	
	26	Kalimantan	Pusaka		1
	27	Sumatera	Azizi	1	
	28	Sumatera	Pondok Tinggi		1
	29	Riau	Pulau Penyengat	1	
	30	Irian Jaya	Patinburak		1
	31	Malay Peninsula	Lebuh Acheh		1
	32	Malay Peninsula	Sultan Abu Bakar	1	
	33	Malay Peninsula	India Perak		1
	34	Malay Peninsula	Zahir	1	
	35	Malay Peninsula	Ubudiah	1	
	36	Malay Peninsula	Paloh		1
	37	Malay Peninsula	Kapitan Keling		1
	38	Malay Peninsula	Batak Rabit		1
	39	Malay Peninsula	Surau Tok Janggut		1
	40	Malay Peninsula	Panglima Kinta		1
	41	Malay Peninsula	Langgar Kelantan	1	

Table 5-1 Mosque patronage.





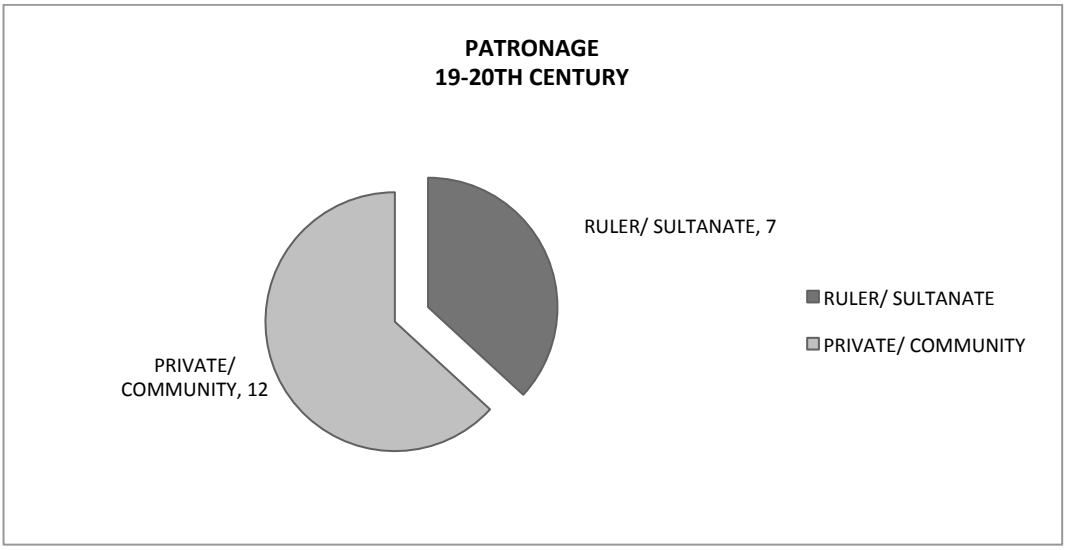


Chart 5-1 Mosque patronage.

In general, the mosques in Island Southeast Asia were built by two types of patrons: royal (ruler) and private individuals (see Table 5-1). Mosques built by the first patron type in most cases became the state or sultanate's mosque. They are mainly the larger mosques, which in Java are called *Masjid Agung* (Grand Mosque). These mosques are the 15th to 18th century Javanese mosques of Masjid Agung Demak (15c), Masjid Agung Banten (15c), Masjid Agung Cirebon Kasepuhan (15c), Masjid Sultan Ternate (17c) and Masjid Agung Surakarta (18c).

Outside of Java, sultanates' mosques are Masjid Azizi Sumatera (19c), Masjid Pulau Penyengat Riau (19c), Masjid Sultan Abu Bakar Johor (20c) and Masjid Zahir Kedah (20c). Other mosques that have royal patronage but were mainly built to serve personal functions (such as being the tomb mosques for the royal cemeteries) are Masjid Mantingan Jepara (15c), Masjid Ubudiah Perak (20c) and Masjid Langgar Kelantan (20c). The rest of the mosques are small in size. These mosques are Masjid Bayan Beleq Nusa Tenggara (16c), Masjid At-Taqwa Nusa Tenggara (18c) and Masjid Patinburak Irian Jaya (19c), which are currently functioning as community mosques.

The second type of patron was made up of private individuals who were leaders of communities or a group of community members. This type of patron can be further categorised into two types: the first includes influential, knowledgeable individuals *('alim*- plural *úlema*), while the second is leaders of the communities with access to large amounts of capital to sponsor and manage the mosques. Mosques built by the first type of patrons in this category are Masjid Sunan Ampel East Java (15c), Masjid Sendang Duwur East Java (16c), Masjid Sunan Giri East Java (15c), Masjid Menara Kudus (16c), Masjid Merah Panjunan (15c), Masjid Palopo Sulawesi (17c), Masjid Teluk Manok Patani (18c) and Masjid Pusaka Kalimantan (19c).

Mosques built by wealthy patrons and community leaders are Masjid An-Nawier Jakarta (18c), Masjid Lebuh Acheh Penang (19c), Masjid India Perak (20c), Masjid Paloh Perak (20c), Masjid Kapitan Keling Penang (20c), Masjid Batak Rabit Perak (19c) and Masjid Panglima Kinta Perak (19c). The rest of the community mosques were built by the community members, and information on some of their original builders or patrons is found to be limited (see Table 5-2 to 5-4).

		REGION	MOSQUES	YEAR BUILT	PATRONAGE	
					ORIGINAL PATRON	MAIN FUNCTION
15TH–16TH CENTURY	1	East Java	Sunan Ampel	1421–1450	Sunan Ampel	Tomb Mosque
	2	East Java	Sendang Duwur	c. 1561	Sunan Sendang	Tomb Mosque
	3	East Java	Sunan Giri	1544 (old) 1857(new)	Sunan Giri	Tomb Mosque
	4	Central Java	Mantingan	c. 1559	Ratu Kalinyamat	Tomb Mosque
	5	Central Java	Kudus	c. 1537	Sunan Kudus	Tomb / Community Mosque
	6	Central Java	Demak	1479	Sultanate of Demak	Sultanate Mosque
	7	West Java	Agung Banten	1552–1570	Sultanate of Banten	Sultanate Mosque
	8	West Java	Cirebon Kasepuhan	1489–1500	Sultanate of Cirebon	Sultanate Mosque
	9	West Java	Panjunan	1435–1480	Sharif 'Abd al-Rahman (Baghdad)	Community Mosque
	10	Nusa Tenggara	Bayan Beleq	1500s	Village Chief	Community Mosque

Table 5-2 15th–16th century mosque types and patrons.

		REGION	MOSQUES	YEAR BUILT	PATRONAGE	
					ORIGINAL PATRON	MAIN FUNCTION
17TH–18TH CENTURY	1	Batavia/ Jakarta	Kebon Jeruk	1786 1797	Chinese Captain Tschoa	Community Mosque
	2	Batavia/ Jakarta	An-Nawier	1760s	Sayid Abdullah (Hadhramaut)	Community Mosque
	3	Batavia/ Jakarta	Al-Mansur	1717	Temenggung from Mataram	Community Mosque
	4	Batavia/ Jakarta	Kg Baru	1743–1748	Arab descents from Hadhramaut	Community Mosque
	5	Nusa Tenggara	At-Taqwa	1600s	Raja Kinanngi Atamalai	Sultanate Mosque
	6	Sulawesi	Palopo	1603	Datuk Suleiman from Minangkabau	Sultanate Mosque
	7	Patani	Teluk Manok	1700s	Wan Hussain as-Senawi	Community Mosque
	8	Malay Peninsula	Tengkera	1728/1780	Funded by Dutch V.O.C.	Community Mosque (Principal)
	9	Malay Peninsula	Kg Hulu	1728	Datuk Harun (Chinese Captain) Funded by Dutch V.O.C.	Community Mosque
	10	Malay Peninsula	Kg Laut	1730s(old) 1967(new site)	A group of 'ulema	Community Mosque
	11	Malay Peninsula	Kg Keling	1748	Funded by Dutch V.O.C.	Community Mosque
	12	North Maluku	Masjid Sultan Ternate	1610	Sultanate of Ternate	Sultanate Mosque

Table 5-3 17th–18th century mosque types and patrons.

		REGION	MOSQUES	YEAR BUILT	PATRONAGE	
					ORIGINAL PATRON	MAIN FUNCTION
19TH–20TH CENTURY	1	Batavia/ Jakarta	Langgar Tinggi	1829	Shaykh Saíd Noom (Arab)	Community Mosque
	2	Batavia/ Jakarta	Al-Makmur Cikini	1850(old) 1924(new)	Leaders of Syarikat Islam	Community Mosque
	3	Surakarta	Agung Surakarta	1757–1763	Surakarta Palace (until 1952), then Majlis Ugama Islam (MUI)	Sultanate Mosque
	4	Kalimantan	Pusaka	1800s	Khatib Dayan	Community Mosque
	5	Sumatera	Azizi	1902	Sultanate of Deli	Sultanate Mosque
	6	Sumatera	Pondok Tinggi	1874–1902	Community Leaders	Community Mosque (Principal)
	7	Riau	Pulau Penyengat	1803–1832	Sultan of Riau	Sultanate Mosque
	8	Irian Jaya	Patinburak	1870s	Raja Tertuar	Community Mosque (Principal)
	9	Malay Peninsula	Lebuh Acheh	1808	Tunku Syed Hussein Idid	Community Mosque
	10	Malay Peninsula	Sultan Abu Bakar	1893–1900	Sultan Abu Bakar (Johor)	State Mosque
	11	Malay Peninsula	India Perak	1908	Sheikh Adam (Tamil Indian)	Community Mosque
	12	Malay Peninsula	Zahir	1912	Sultan Abdul Hamid Halim Shah (Kedah)	State Mosque
	13	Malay Peninsula	Ubudiah	1914	Sultan Idris Shah (Perak)	Tomb Mosque
	14	Malay Peninsula	Paloh	1912	Dato'Adika di Raja	Community Mosque
	15	Malay Peninsula	Kapitan Keling	18th c (old) 1918(current)	Caudeer Mohudeen (South Indian)	Community Mosque
	16	Malay Peninsula	Batak Rabit	1885	Laksamana Tok Tambah	Community Mosque
	17	Malay Peninsula	Surau Tok Janggut	1900s	Community	Community Mosque
	18	Malay Peninsula	Panglima Kinta	1898	Dato'Panglima Kinta	Community / Tomb Mosque
	19	Malay Peninsula	Langgar Kelantan	1870	Sultan Muhammad IV (Tengku Long Senik)	Tomb Mosque

Table 5-4 19th–20th century mosque types and patrons.

5.2.2 Site Placement

	REF	REGION	NAME OF MOSQUE	GEOGRAPHICAL		SITE PLACEMENT					
				FLAT	HILL	NEAR MAIN ROAD	NEAR RIVER/ SEA	PUBLIC SQUARE	SCHOOL/ LIBRARY	BAZAAR/ SHOPS	PALACE/ RULING/ ADMIN
15TH–16TH CENTURY	1	East Java	Sunan Ampel	1			1			1	1
	2	East Java	Sendang Duwur		1						
	3	East Java	Sunan Giri		1					1	
	4	Central Java	Mantingan		1	1					
	5	Central Java	Kudus	1		1		1		1	1
	6	Central Java	Demak	1		1	1	1	1	1	1
	7	West Java	Agung Banten	1		1	1	1		1	1
	8	West Java	Cirebon Kasepuhan	1				1			1
	9	West Java	Panjunan	1		1					
	10	Nusa Tenggara	Bayan Beleq		1	1					
	TOTAL			6	4	6	3	4	1	5	5

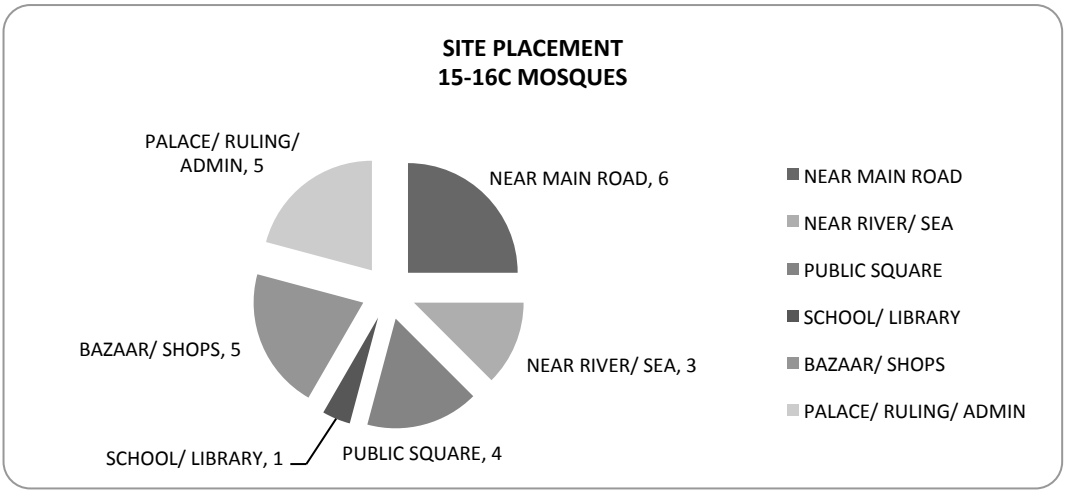
Table 5-5 15th–16th century mosque site placement.

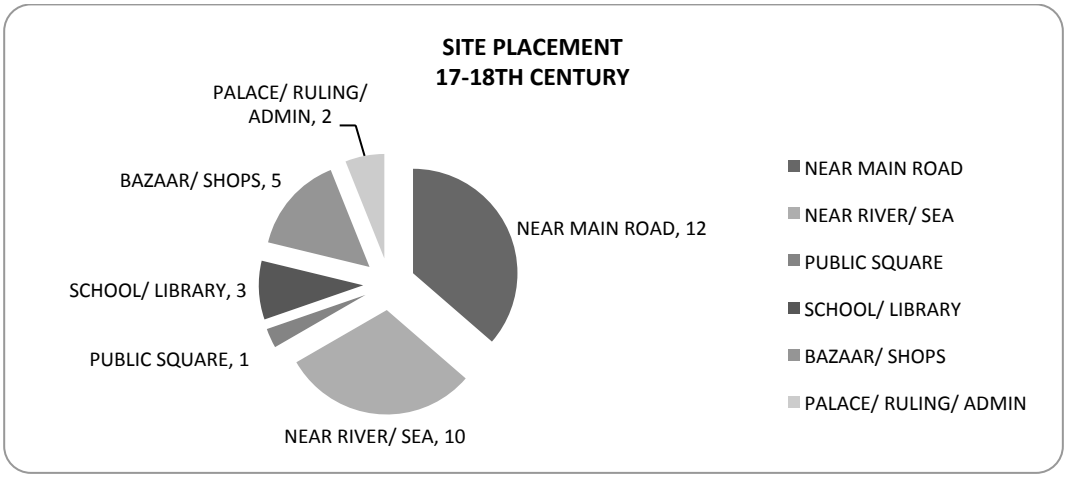
	REF	REGION	NAME OF MOSQUE	GEOGRAPHICAL		SITE PLACEMENT					
				FLAT	HILL	NEAR MAIN ROAD	NEAR RIVER/ SEA	PUBLIC SQUARE	SCHOOL/ LIBRARY	BAZAAR/ SHOPS	PALACE/ RULING/ ADMIN
17TH–18TH CENTURY	1	Batavia/Jakarta	Kebon Jeruk	1		1	1			1	
	2	Batavia/Jakarta	An-Nawier	1		1	1			1	
	3	Batavia/Jakarta	Al-Mansur	1		1					
	4	Batavia/Jakarta	Kg Baru	1		1	1				
	5	Nusa Tenggara	At-Taqwa		1	1	1				
	6	Sulawesi	Palopo	1		1		1			1
	7	Patani	Teluk Manok	1		1	1		1		
	8	Malay Peninsula	Tengkera	1		1	1		1	1	
	9	Malay Peninsula	Kg Hulu	1		1	1			1	
	10	Malay Peninsula	Kg Laut	1		1	1		1		
	11	Malay Peninsula	Kg Keling	1		1	1			1	
	12	North Maluku	Masjid Sultan Ternate	1		1	1				1
	TOTAL			**11**	**1**	**12**	**10**	**1**	**3**	**5**	**2**

Table 5-6 17th–18th century mosque site placement.

	REF	REGION	NAME OF MOSQUE	GEOGRAPHICAL		SITE PLACEMENT					
				FLAT	HILL	NEAR MAIN ROAD	NEAR RIVER/ SEA	PUBLIC SQUARE	SCHOOL/ LIBRARY	BAZAAR/ SHOPS	PALACE/ RULING/ ADMIN
19TH–20TH CENTURY	1	Batavia/Jakarta	Langgar Tinggi	1		1	1			1	
	2	Batavia/Jakarta	Al-Makmur Cikini	1		1	1		1		
	3	Surakarta	Agung Surakarta	1		1		1	1	1	1
	4	Kalimantan	Pusaka	1			1				
	5	Sumatera	Azizi	1		1					1
	6	Sumatera	Pondok Tinggi	1		1			1		
	7	Riau	Pulau Penyengat		1	1	1				1
	8	Irian Jaya	Patinburak	1			1				
	9	Malay Peninsula	Lebuh Acheh	1			1		1	1	
	10	Malay Peninsula	Sultan Abu Bakar		1	1	1				1
	11	Malay Peninsula	India Perak	1		1	1		1	1	
	12	Malay Peninsula	Zahir	1		1	1			1	1
	13	Malay Peninsula	Ubudiah		1						1
	14	Malay Peninsula	Paloh	1		1	1		1	1	
	15	Malay Peninsula	Kapitan Keling	1		1	1		1	1	
	16	Malay Peninsula	Batak Rabit	1		1	1			1	
	17	Malay Peninsula	Surau Tok Janggut	1			1			1	
	18	Malay Peninsula	Panglima Kinta	1		1	1			1	
	19	Malay Peninsula	Langgar Kelantan	1		1					
	TOTAL			**16**	**3**	**14**	**14**	**1**	**7**	**10**	**6**

Table 5-7 19th–20th century mosque site placement.





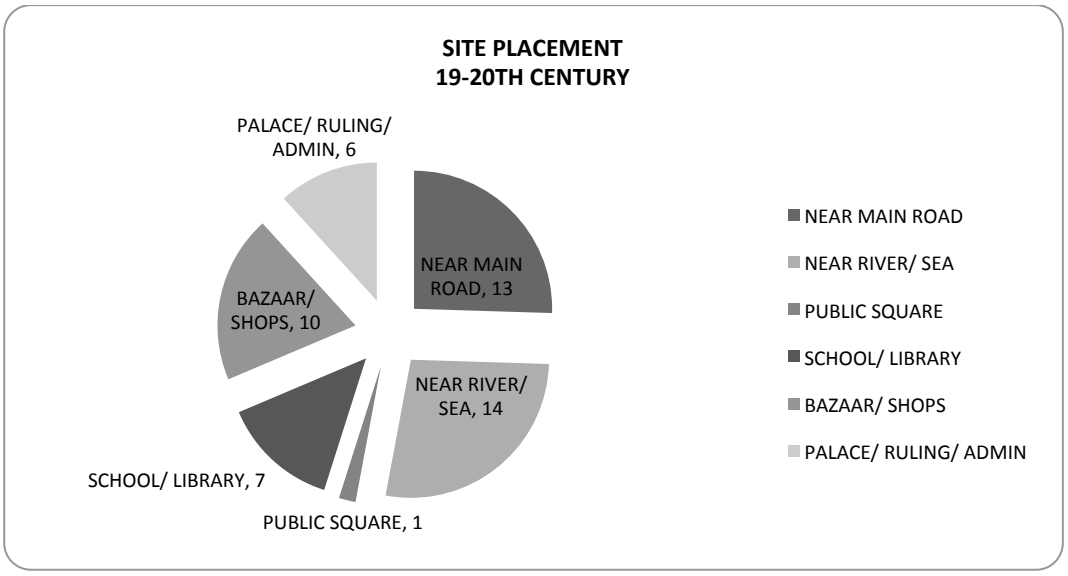


Chart 5-2 Site placement.

Each mosque was analysed for design and functional criteria that determine its placement within the site chosen. The placement of the mosque and its layout within the site context indicates the initial design intent as well as the role of the mosque within its immediate fabric. Each mosque was analysed for its location: whether it is built on a flat or hilly land, if it is located close to main roads, rivers or sea (which used to be the main means of commuting), if it is placed near public facilities such as the markets, schools or public square, and if it is built close to a palace or the ruling administration centre.

Based on the data populated, most of the mosques studied were built on flat land. Only eight mosques were built on hilly sites. The mosques built on hills are mainly the tomb mosques or sultanate mosques. In terms of functional placement of the mosque within its immediate context, the survey done on the 15th–16th century mosques reveals that the mosques of this period were almost equally placed near the main roads, river or sea and close to the ruling centre, public square and markets. Only one mosque, Masjid Agung Demak, was built close to a school. However, historical background study of the mosque reveals that the school was actually built in 1936 (i.e., five centuries after the mosque was built) (see Chapter 4.2.6).

The mosques of the 17th and 18th centuries showed a significant reduction in their close proximity to ruling centres or public squares. However, the pattern returns in the 19th and 20th centuries, and is especially seen in sultanate mosques outside of Java.

5.2.3 Site Design

PERIOD	REF	REGION	MOSQUES	*G/W*	*LV*	*SE*	*OS*	*WE*	*IC*	*C/T*
15TH–16TH CENTURY	1	East Java	Sunan Ampel	1		1				1
	2	East Java	Sendang Duwur	1	1	1	1	1		1
	3	East Java	Sunan Giri	1	1	1	1	1		1
	4	Central Java	Mantingan	1	1	1	1	1		1
	5	Central Java	Kudus	1		1	1	1		1
	6	Central Java	Demak	1		1	1	1		1
	7	West Java	Agung Banten	1		1	1	1		1
	8	West Java	Cirebon Kasepuhan	1		1		1		1
	9	West Java	Panjunan	1		1				
	10	Nusa Tenggara	Bayan Beleq		1		1			1
TOTAL	**10**			**9**	**4**	**9**	**7**	**7**	**0**	**9**
17TH–18TH CENTURY	1	Batavia/Jakarta	Kebon Jeruk	1		1		1		1
	2	Batavia/Jakarta	An-Nawier	1		1				1
	3	Batavia/Jakarta	Al-Mansur	1		1				1
	4	Batavia/Jakarta	Kg Baru	1		1		1		
	5	Nusa Tenggara	At-Taqwa		1	1	1			1
	6	Sulawesi	Palopo	1	1					
	7	Patani	Teluk Manok	1		1	1	1		
	8	Malay Peninsula	Tengkera	1		1	1	1		1
	9	Malay Peninsula	Kg Hulu	1		1	1	1		1
	10	Malay Peninsula	Kg Laut	1		1	1	1		1
	11	Malay Peninsula	Kg Keling	1		1	1	1		1
	12	North Maluku	Sultan Ternate	1		1	1	1		
TOTAL	**12**			**11**	**2**	**11**	**7**	**8**	**0**	**8**
19TH–20TH CENTURY	1	Batavia/Jakarta	Langgar Tinggi	1		1				
	2	Batavia/Jakarta	Al-Makmur Cikini	1		1		1		
	3	Surakarta	Agung Surakarta	1		1	1	1		1
	4	Kalimantan	Pusaka	1		1	1	1		1
	5	Sumatera	Azizi	1		1	1			1
	6	Sumatera	Pondok Tinggi	1						
	7	Riau	Pulau Penyengat	1	1	1	1	1		1
	8	Irian Jaya	Patinburak	1		1	1	1		
	9	Malay Peninsula	Lebuh Acheh	1		1	1	1		1
	10	Malay Peninsula	Sultan Abu Bakar	1	1	1	1	1		
	11	Malay Peninsula	India Perak	1		1	1			
	12	Malay Peninsula	Zahir	1		1	1	1		
	13	Malay Peninsula	Ubudiah	1	1	1	1	1		1
	14	Malay Peninsula	Paloh	1		1	1	1		1
	15	Malay Peninsula	Kapitan Keling	1		1	1	1		1
	16	Malay Peninsula	Batak Rabit	1		1	1	1		1
	17	Malay Peninsula	Surau Tok Janggut	1		1	1	1		
	18	Malay Peninsula	Panglima Kinta	1		1	1			1
	19	Malay Peninsula	Langgar Kelantan	1		1	1	1		1
TOTAL	**19**			**19**	**3**	**18**	**16**	**14**	**0**	**11**

LEGEND

G/F	**GATEWAYS/ FENCE**
LV	**LEVELS**
SO	**SEMI-OPEN STRUCTURES**
O/L	**OPEN SPACE/ LANDSCAPE**
WE	**WATER ELEMENT**
IC	**INTERNAL COURTYARD**
C/T	**CEMETERY/ TOMB**

Table 5-8 Site design.

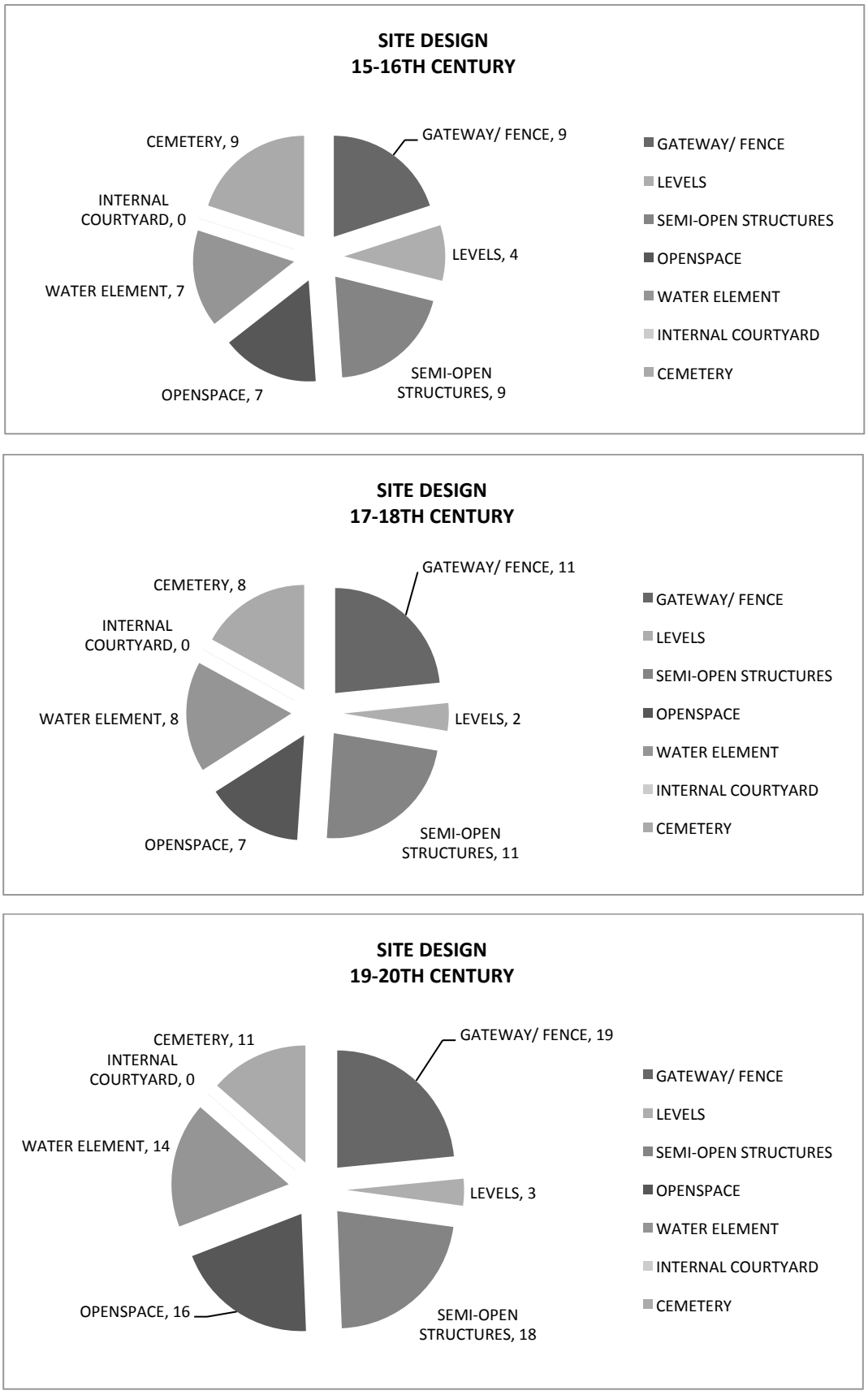


Chart 5-3 Site design.

The survey looks for the design decision-making of the mosque's site layout and design, in terms of open spaces and elements surrounding the core function, which is the main prayer hall. It evaluates the existence of demarcation between profane and sacred zones through the treatments of building landscape and elements, as well as provision for socio-religious activities through spatial planning and architectural grammar.

The boundaries of the mosques are clearly marked in all of the mosques surveyed – mainly through the provision of walled fences and gateways. In some mosques the sacred zone is further emphasised by the placement of the mosques on raised sites, thereby marking the entry to the mosques' compounds by change of levels and various gateway designs. This pattern is mainly seen in the Javanese mosques that primarily function as tomb mosques, such Masjid Sendang Duwur (15c), Masjid Sunan Giri (15c) and Masjid Mantingan (16c).

A distinctive pattern emerging in all of the Island Southeast Asia mosques is the existence of open spaces surrounding the mosques. In 15th–16th century mosques, 7 out of 10 (70%) mosques have surrounding open spaces; in 17th–18th century mosques, 7 out of 12 (60%) have open spaces; and in 19th–20th century mosques, 16 out 19 mosques surveyed (84%) have surrounding open spaces. However, a peculiar pattern in the mosques surveyed is that a big portion of the open spaces surrounding the mosques are dedicated for use as cemeteries, thereby making cemeteries a part of the mosques' building landscapes. In 15th–16th century mosques, 90% of them have a cemetery forming the mosque's landscape; in 17th–18th century mosques, 67% have cemeteries; and in 19th–20th century mosques, the number decreases to 58% (Table 5-8).

Similarly, none of the mosques surveyed had an internal courtyard, as found in the Arabian mosque prototypes.

Figure 5-1 *Serambi* of Masjid Agung Demak.

Figure 5-2 *Serambi* of Masjid Agung Banten.

Figure 5-3 *Serambi* of Masjid Agung Cirebon Kasepuhan.

Figure 5-4 *Serambi* of Masjid Mantingan.

Semi-open structures formed main components of the mosques in Island Southeast Asia throughout the periods of study (see Figures 5-1 to 5-4). They are provided in the forms of semi-open *serambis* (veranda or porch) attached to the main building, free standing huts with gable or pyramidal roofs (*wakaf*) (Figure 5-5) in the compounds of the mosques and covered walkways connecting various parts of the mosque complex. The semi-open structures are often utilised by mosque-goers for social functions involving activities permitted within the mosque compound. All of the mosques surveyed, with the exception of Masjid Bayan Beleq, Palopo and Pondok Tinggi, have *serambis* surrounding the main prayer hall. The three aforementioned mosques originally had surrounding *serambis* that have been upgraded and walled, incorporated as part of the prayer halls' extensions.

Figure 5-5 *Wakaf* in the compound of Masjid Kampung Laut.

The use of a water element as part of the mosque's site design or landscape material is found to be related to either liturgical requirements of *thaharah* (ritual purity) or strategic purposes such as utilising the sea or river as a source of water or transport network. The Javanese mosques surveyed employed a water element mainly in the forms of moats surrounding ablution places, such as in Masjid Agung Demak (15c) (Figure 5-6) and Masjid Sunan Kudus (16c) (Figure 5-7), or moats surrounding the

entrance to the mosque's *serambi*, such as in Masjid Sunan Giri (15c) (Figure 5-8), Masjid Agung Banten (16c) and Masjid Agung Surakarta (19c). Moats as a means of ritual purification are not found in any mosques surveyed outside of Java.

Figure 5-6 Moats surrounding the ablution and toilet building of Masjid Agung Demak.

Figure 5-7 Moat demarcating ablution area of Masjid Menara Kudus.

Figure 5-8 Moat surrounding the main hall of Masjid Sunan Giri.

Water pools to take ritual ablution are found to be a popular pattern mainly in Malay Peninsula mosques, although in Java, Masjid Menara Kudus (16c) utilises the same facility. Water pools in the forms of square or rectangular water containers built using cement rendered bricks are found in Masjid Tengkera (18c), Masjid Kampung Hulu (18c) (Figure 5-9), Masjid Kampung Laut (18c), Masjid Kampung Keling (18c) (Figure 5-10), Masjid Lebuh Acheh (19c) (Figure 5-11), Masjid Kapitan Keling (19c) (Figure 5-12), Surau Tok Janggut (20c), Masjid Paloh (20c) and Masjid Langgar Kelantan (19c). Some of the mosques surveyed are also found with old wells, such as Masjid Sendang Duwur (15c), Masjid Agung Cirebon Kasepuhan (16c) and Masjid Kampung Baru (18c). Masjid Mantingan (16c) has a turtle pond on the southeastern side of the mosque compound.

Figure 5-9 Water pool at Masjid Kampung Hulu.

Figure 5-10 Water pool at Masjid Kampung Keling.

Figure 5-11 Water pool for ablution at Masjid Leboh Acheh.

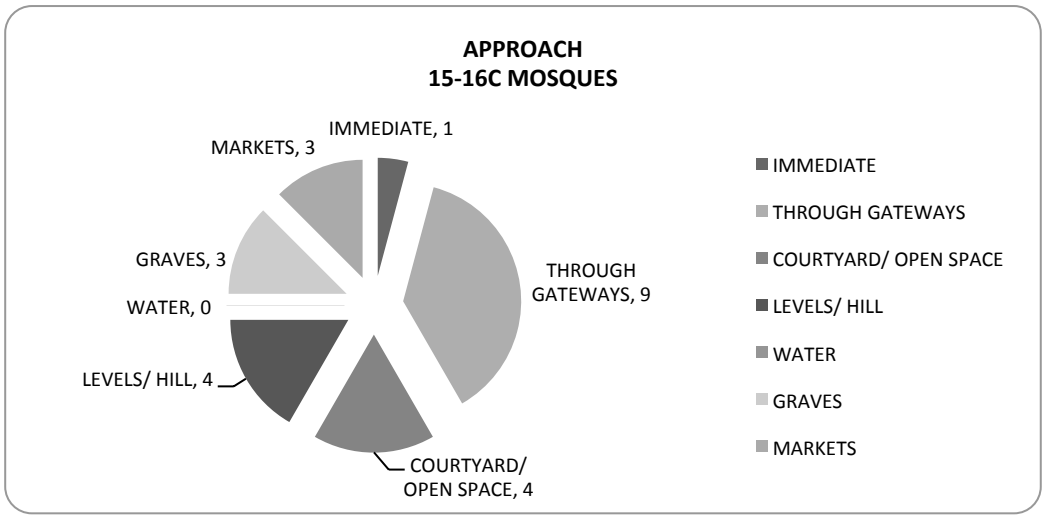
Figure 5-12 Water pool at Masjid Kapitan Keling.

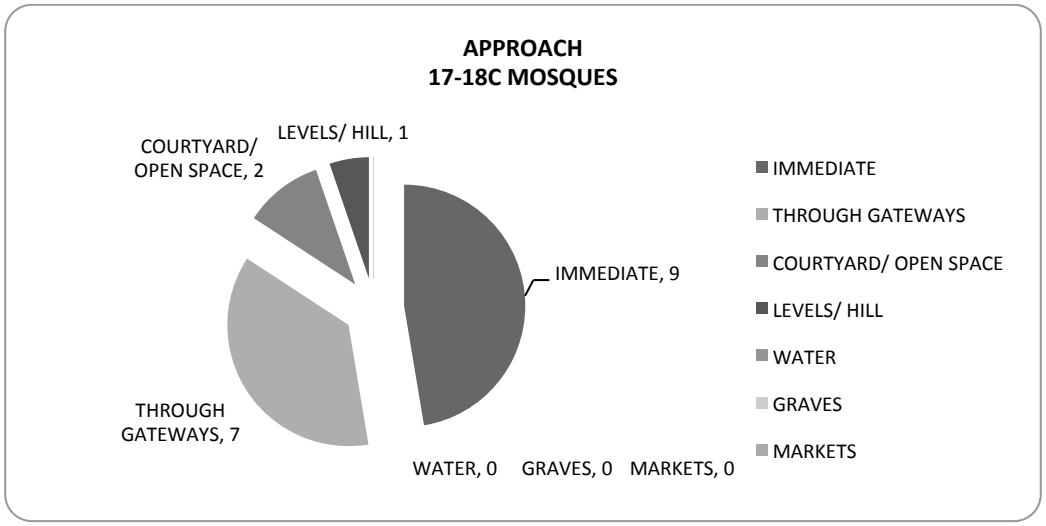
Mosques that are found to have taken the advantage of being at a waterfront – either near the river or the seashore – are Masjid Agung Demak (15c), Masjid Agung Banten (16c), Masjid Kebon Jeruk (18c), Masjid Teluk Manok (18c), Masjid Kampung Laut (18c), Masjid Sultan Ternate (18c), Masjid Al-Makmur Cikini (17c), Masjid Pusaka (18c), Masjid Pulau Penyengat (19c), Masjid Sultan Abu Bakar (20c), Masjid Zahir (20c), Masjid Paloh (20c), Masjid Batak Rabit (19c) and Surau Tok Janggut (20c).

5.2.4 Approach and Accessibility

REF	REGION	NAME OF MOSQUE	APPROACH							DISTANCE FR SETTLEMENT		
			IMMEDIATE	THROUGH GATEWAYS	COURTYARD/ OPEN SPACE	LEVELS/ HILL	WATER	GRAVES	MARKETS	CLOSE	MEDIUM	FAR
1	East Java	Sunan Ampel		1					1	1		
2	East Java	Sendang Duwur		1	1	1		1		1		
3	East Java	Sunan Giri		1		1		1	1			1
4	Central Java	Mantingan		1	1	1					1	
5	Central Java	Kudus		1					1	1		
6	Central Java	Demak		1	1					1		
7	West Java	Agung Banten		1	1			1		1		
8	West Java	Cirebon Kasepuhan		1						1		
9	West Java	Panjunan	1	1						1		
10	Nusa Tenggara	Bayan Beleq				1				1		
TOTAL			**1**	**9**	**4**	**4**	**0**	**3**	**3**	**8**	**1**	**1**
1	Batavia/Jakarta	Kebon Jeruk	1								1	
2	Batavia/Jakarta	An-Nawier	1							1		
3	Batavia/Jakarta	Al-Mansur	1	1						1		
4	Batavia/Jakarta	Kg Baru	1							1		
5	Nusa Tenggara	At-Taqwa				1				1		
6	Sulawesi	Palopo	1							1		
7	Patani	Teluk Manok		1	1					1		
8	Malay Peninsula	Tengkera	1	1							1	
9	Malay Peninsula	Kg Hulu	1	1							1	
10	Malay Peninsula	Kg Laut		1	1						1	
11	Malay Peninsula	Kg Keling	1	1								1
12	North Maluku	Masjid Sultan Ternate	1	1						1		
TOTAL			**9**	**7**	**2**	**1**	**0**	**0**	**0**	**7**	**4**	**1**
1	Batavia/Jakarta	Langgar Tinggi	1							1		
2	Batavia/Jakarta	Al-Makmur Cikini	1							1		
3	Surakarta	Agung Surakarta		1	1					1		
4	Kalimantan	Pusaka		1	1					1		
5	Sumatera	Azizi		1	1					1		
6	Sumatera	Pondok Tinggi	1							1		
7	Riau	Pulau Penyengat		1		1				1		
8	Irian Jaya	Patinburak	1							1		
9	Malay Peninsula	Lebuh Acheh	1								1	
10	Malay Peninsula	Sultan Abu Bakar			1	1						1
11	Malay Peninsula	India Perak		1								1
12	Malay Peninsula	Zahir		1	1							1
13	Malay Peninsula	Ubudiah		1	1	1						1
14	Malay Peninsula	Paloh	1									1
15	Malay Peninsula	Kapitan Keling	1	1	1						1	
16	Malay Peninsula	Batak Rabit	1							1		
17	Malay Peninsula	Surau Tok Janggut	1							1		
18	Malay Peninsula	Panglima Kinta	1	1							1	
19	Malay Peninsula	Langgar Kelantan	1	1						1		
TOTAL			**10**	**9**	**7**	**3**	**0**	**1**	**0**	**11**	**3**	**5**

Table 5-9 Approach and accessibility.





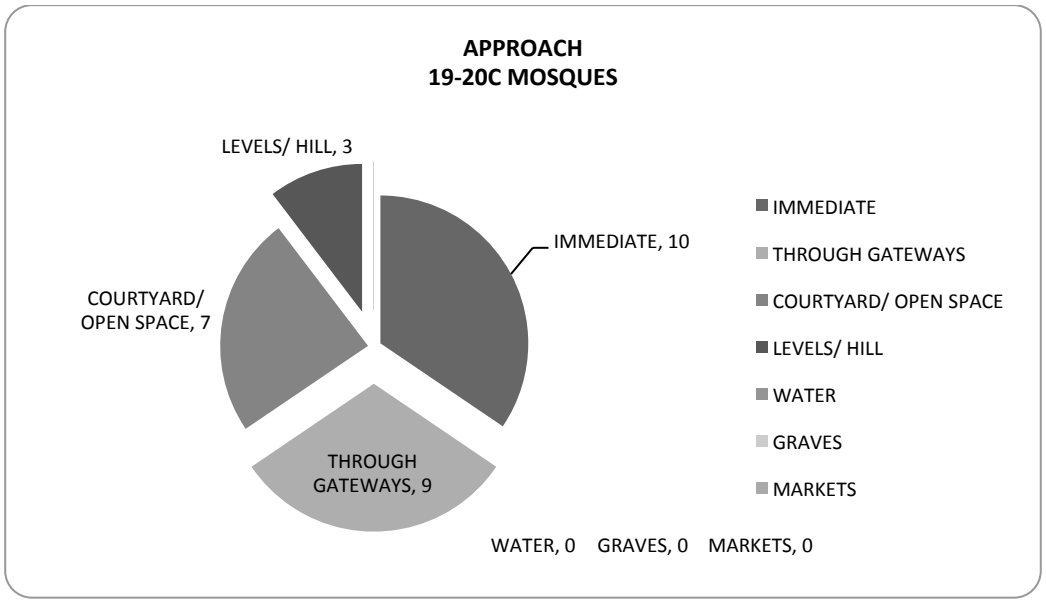


Chart 5-4 Approach and accessibility.

The mosques were surveyed for their level of accessibility, to analyse the way the building landscape is designed within its immediate context. The survey looks at the proximity of the mosque to the people's settlements; it also looks at the building's approach, i.e. whether access to the mosque is direct (immediate) or through a designed landscape layout. The data populated from the survey is indicated in Table 5-9 and Chart 5-4.

Almost all of the mosques of the 15th and 16th centuries were built in close proximity to people's settlements, with the exception of Masjid Sunan Giri, which was built on the hilltop with only foot access to the mosque (Figure 5-13). However, a significant reduction is seen in the post-16th century mosques with respect to their close proximity to people's settlements. By the 19th and 20th centuries, almost half of the mosques surveyed were built a considerable distance from the people's settlements (medium to far).

In terms of building layout and landscape design, the mosques were analysed for the art of placement (i.e., whether entrance to the mosque was preceded with changes in levels, and whether one will have to go through a gateway or series of gateways, or pass through water elements or graveyards in order to arrive at the mosque's entrance). The survey indicated that there was a variety of treatments to the mosque landscapes found in the 15th and 16th century mosques compared to post-16th century mosques. Four of the pre-16th century mosques were built on hilly sites. The mosques were also designed with a gateway o with open space surrounding the mosque, and often with open graveyards or tombs incorporated in their landscape areas (Figure 5-14 and 5-15). A *bazaar* or market was also a distinctive feature of the mosques in this period, whereby access to the mosque was not always direct, but through a passageway with markets selling goods to mosque-goers.

However, this pattern is significantly reduced in the post-16th century mosques. The mosques built in the 17th and 18th centuries were found to have been built with less variety of approach. Forty-seven percent of the mosques of this period were built with immediate access, as opposed to only foour percent of the 15th and 16th century mosques, which were designed with an immediate approach. Apart from that, the mosque's landscape has undergone a complete transformation, as entry to the mosque was not preceded either with a change of levels or passing through markets or

graveyards. This pattern persisted in the 19th and 20th century mosques, with the exceptions of sultanate mosques, which were built on hilly sites.

Figure 5-13 Masjid Sunan Giri – access is only available on foot.

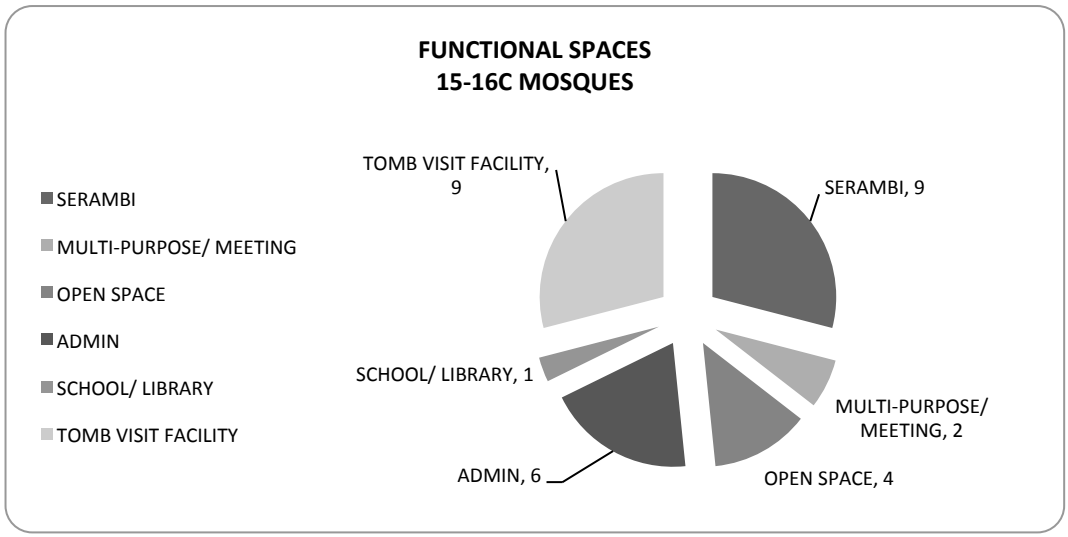
Figure 5-14 Masjid Mantingan Jepara – access to the mosque via stairs, gateway and open courtyard.

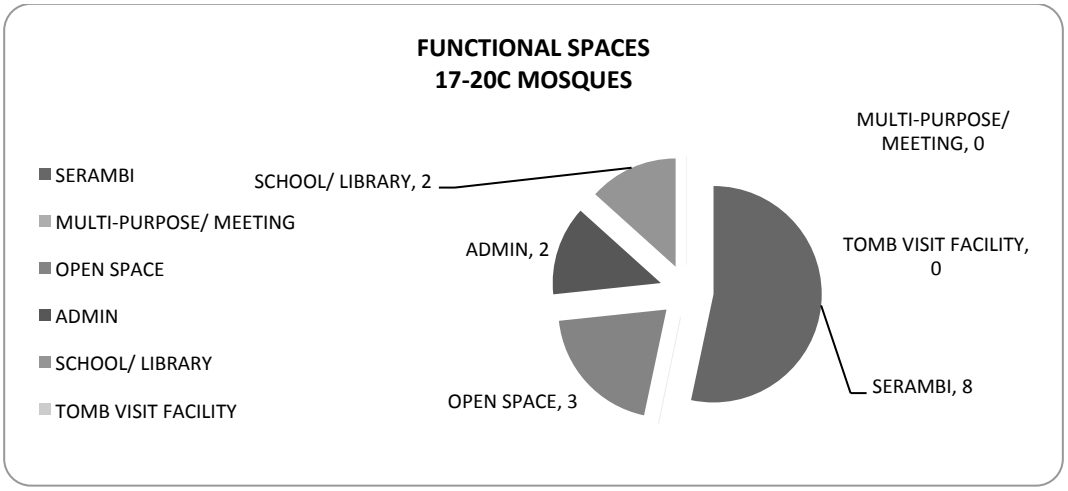
Figure 5-15 Access to Masjid Sendang Duwur via gateways and courtyards of cemeteries.

5.2.5 Functional Spaces

	REF	REGION	NAME OF MOSQUE	SERAMBI	MULTI-PURPOSE/ MEETING	OPEN SPACE	ADMIN	SCHOOL/ LIBRARY	TOMB VISIT FACILITY
15TH–16TH CENTURY	1	East Java	Sunan Ampel	1	1		1		1
	2	East Java	Sendang Duwur	1					1
	3	East Java	Sunan Giri	1		1	1		1
	4	Central Java	Mantingan	1		1			1
	5	Central Java	Kudus	1			1		1
	6	Central Java	Demak	1		1	1	1	1
	7	West Java	Agung Banten	1	1	1	1		1
	8	West Java	Cirebon Kasepuhan	1			1		1
	9	West Java	Panjunan	1					
	10	Nusa Tenggara	Bayan Beleq						1
	TOTAL: 10			**9**	**2**	**4**	**6**	**1**	**9**
17TH–18TH CENTURY	1	Batavia/Jakarta	Kebon Jeruk						
	2	Batavia/Jakarta	An-Nawier	1			1		
	3	Batavia/Jakarta	Al-Mansur						
	4	Batavia/Jakarta	Kg Baru	1					
	5	Nusa Tenggara	At-Taqwa	1					
	6	Sulawesi	Palopo						
	7	Patani	Teluk Manok			1	1	1	
	8	Malay Peninsula	Tengkera	1				1	
	9	Malay Peninsula	Kg Hulu	1					
	10	Malay Peninsula	Kg Laut	1		1			
	11	Malay Peninsula	Kg Keling	1					
	12	North Maluku	Masjid Sultan Ternate	1		1			
	TOTAL: 12			**8**	**0**	**3**	**2**	**2**	**0**
19TH–20TH CENTURY	1	Batavia/Jakarta	Langgar Tinggi						
	2	Batavia/Jakarta	Al-Makmur Cikini	1		1	1	1	
	3	Surakarta	Agung Surakarta	1		1	1	1	1
	4	Kalimantan	Pusaka	1		1			
	5	Sumatera	Azizi	1		1			1
	6	Sumatera	Pondok Tinggi						
	7	Riau	Pulau Penyengat	1	1	1	1		
	8	Irian Jaya	Patinburak	1					
	9	Malay Peninsula	Lebuh Acheh	1					
	10	Malay Peninsula	Sultan Abu Bakar	1	1	1	1		
	11	Malay Peninsula	India Perak	1			1	1	
	12	Malay Peninsula	Zahir	1		1	1		
	13	Malay Peninsula	Ubudiah	1		1	1		1
	14	Malay Peninsula	Paloh	1				1	
	15	Malay Peninsula	Kapitan Keling	1		1	1	1	1
	16	Malay Peninsula	Batak Rabit	1			1		
	17	Malay Peninsula	Surau Tok Janggut	1					
	18	Malay Peninsula	Panglima Kinta	1				1	
	19	Malay Peninsula	Langgar Kelantan	1		1			1
	TOTAL: 19			**17**	**2**	**10**	**9**	**6**	**5**

Table 5-10 Functional spaces.





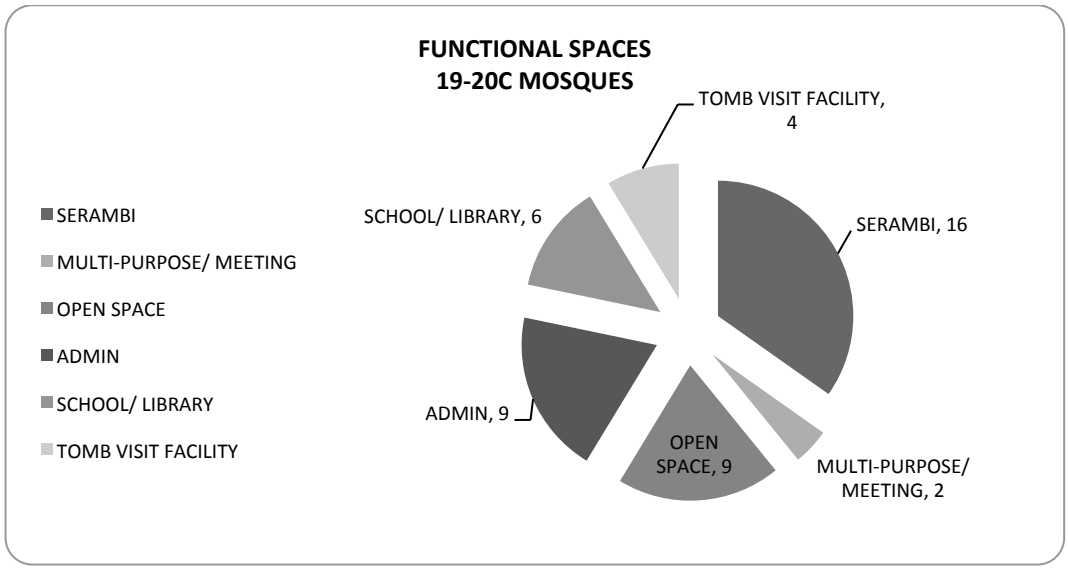


Chart 5-5 Functional spaces.

The mosques were analysed for functional spaces provided for mosque goers. Functional spaces are divided into two main categories. The first are the essential functions to satisfy liturgical requirements, such as the *qibla* wall, provision for *imam* (*mihrab*), provision for *khatib* (*mimbar*) and a place for *muezzin* (minaret). The second category includes spaces to accommodate socio-religious activities for mosque-goers such as spaces for social meetings depicted in the provision of the veranda (*serambi*), meeting hall and open spaces for social gatherings and children's play area. Other functional spaces considered as having a socio-religious nature are provisions for tomb visit facilities, information centres such as libraries or museums, and administration offices that cater to public affairs related to socio-religious activities.

All of the mosques surveyed fulfilled the requirements for essential functions of mosques, although the treatment of these provisions may vary. An interesting pattern, however, is found in the provision of socio-religious spaces considered as complementary. The results are displayed in Table 5-10. Tomb visit facilities are a dominant feature in 15th and 16th century mosques. Nine out of 10 mosques provided this facility in the forms of *pawestren* (ladies' closed areas) and covered structures like *cungkups*. This pattern, however, completely diminished in the 17th and 18th century mosques, only to reappear in the post-19th century mosques of the sultans (see Chart 5-5).

The *serambi* is found to be a critical component in Island Southeast Asian mosque designs. They are found in almost all of the mosques surveyed across the temporal and regional boundaries. The difference between these mosques is often the size of the *serambi*; however, its functions remain the same, as it is used by mosque-goers for casual activities such as resting and socialising.

The existence of open spaces in the mosques surveyed has been discussed in the section regarding site design above (Figure 5-16 and 5-17). Despite the apparent existence of open spaces as accommodating for social functions, the mosques' landscapes are often found to be filled with cemeteries, thereby reducing the 'social' nature of the space and turning it into one that is 'ritual' or sacred.

Figure 5-16 View of Masjid Agung Banten from the *alun-alun*.

Figure 5-17 Masjid Agung Demak open space.

5.2.6 Formative Aesthetics

PERIOD	REF	REGION	NAME OF MOSQUE	FORMATIVE AESTHETIC															
				FLOOR PLAN					WALL OPENINGS					ROOF FORM					
				A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
15TH–16TH CENTURY	1	East Java	Sunan Ampel	1				1					1	1		1	1	1
	2	East Java	Sendang Duwur	1				1				1	1	1				
	3	East Java	Sunan Giri	1				1	1				1		1			
	4	Central Java	Mantingan	1				1					1	1				
	5	Central Java	Kudus	1				1		1			1	1	1	1		1
	6	Central Java	Demak	1				1					1	1				1
	7	West Java	Agung Banten	1				1			1		1	1				
	8	West Java	Cirebon Kasepuhan	1				1				1	1	1				
	9	West Java	Panjunan	1				1					1					
	10	Nusa Tenggara	Bayan Beleq	1					1				1					
	10	**TOTAL**		**10**	**0**	**0**	**0**	**9**	**2**	**1**	**1**	**2**	**10**	**7**	**2**	**2**	**1**	**3**
17TH–18TH CENTURY	1	Batavia/ Jakarta	Kebon Jeruk	1				1	1		1		1		1		1	1
	2	Batavia/ Jakarta	An-Nawier	1				1						1	1		1	1
	3	Batavia/ Jakarta	Al-Mansur	1				1	1	1	1		1	1	1			1
	4	Batavia/ Jakarta	Kg Baru	1				1			1		1		1			
	5	Nusa Tenggara	At-Taqwa	1				1					1					
	6	Sulawesi	Palopo	1				1	1		1	1	1					
	7	Patani	Teluk Manok	1				1			1			1				1
	8	Malay Peninsula	Tengkera	1				1			1		1					1
	9	Malay Peninsula	Kg Hulu	1				1			1		1					1
	10	Malay Peninsula	Kg Laut	1				1					1	1				1
	11	Malay Peninsula	Kg Keling	1				1			1		1					1
	12	North Maluku	Masjid Sultan Ternate	1				1			1		1					
	12	**TOTAL**		**12**	**0**	**0**	**0**	**12**	**3**	**1**	**9**	**1**	**10**	**4**	**4**	**0**	**2**	**8**
19TH–20TH CENTURY	1	Batavia/ Jakarta	Langgar Tinggi	1				1					1	1				
	2	Batavia/ Jakarta	Al-Makmur Cikini	1				1			1		1	1		1		1
	3	Surakarta	Agung Surakarta	1				1			1		1	1				1
	4	Kalimantan	Pusaka	1	1			1			1		1			1	1	
	5	Sumatera	Azizi	1	1			1	1		1				1	1		1
	6	Sumatera	Pondok Tinggi	1				1					1					
	7	Riau	Pulau Penyengat	1			1	1	1		1			1	1	1		1
	8	Irian Jaya	Patinburak		1			1			1			1		1	1	1
	9	Malay Peninsula	Lebuh Acheh	1				1	1	1	1	1		1	1	1		1
	10	Malay Peninsula	Sultan Abu Bakar	1				1	1		1			1	1			1
	11	Malay Peninsula	India Perak	1				1		1	1		1		1			1
	12	Malay Peninsula	Zahir	1	1			1	1	1		1			1	1	1	1
	13	Malay Peninsula	Ubudiah		1				1		1				1	1		1
	14	Malay Peninsula	Paloh	1				1			1		1					1
	15	Malay Peninsula	Kapitan Keling	1					1		1			1	1	1		1
	16	Malay Peninsula	Batak Rabit	1				1			1		1					1
	17	Malay Peninsula	Surau Tok Janggut	1				1			1			1				1
	18	Malay Peninsula	Panglima Kinta	1				1	1		1		1		1	1		1
	19	Malay Peninsula	Langgar Kelantan	1				1						1				
	19	**TOTAL**		**17**	**5**	**0**	**1**	**17**	**8**	**3**	**15**	**2**	**9**	**10**	**9**	**10**	**3**	**15**

LEGENDS

FLOOR PLAN					WALL OPENINGS					ROOF FORM				
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
RECT/ SQUARE	OCTAGONAL	CIRCLE	HYBRID/ OTHER	RECT	ARCH	POINTED	CIRCLE/ ROUND TOP/ OGEE	OTHER	PYRAMID	GABLE/ HIP	PARAPET	DOME	OCTAGONAL/ POINTED/ OTHER	MINARET/ TOWER

Table 5-11 Formative aesthetics.

The mosques selected are studied for the primary forms in the designs of both solids (i.e., floor plan, walls and roof forms) and voids (i.e, wall openings). The results are as displayed in Table 5-11.

- **Floor Plan Forms**

The mosques from the 15th to 18th centuries generally have either rectangular or square floor plans, or a combination of these two forms. The main floor plan form is usually square, with the additional floor area usually being rectangular – although in the case of Masjid Teluk Manok (18th century), for example, the floor plan is rectangular, as it adopts the traditional house typology for its design.

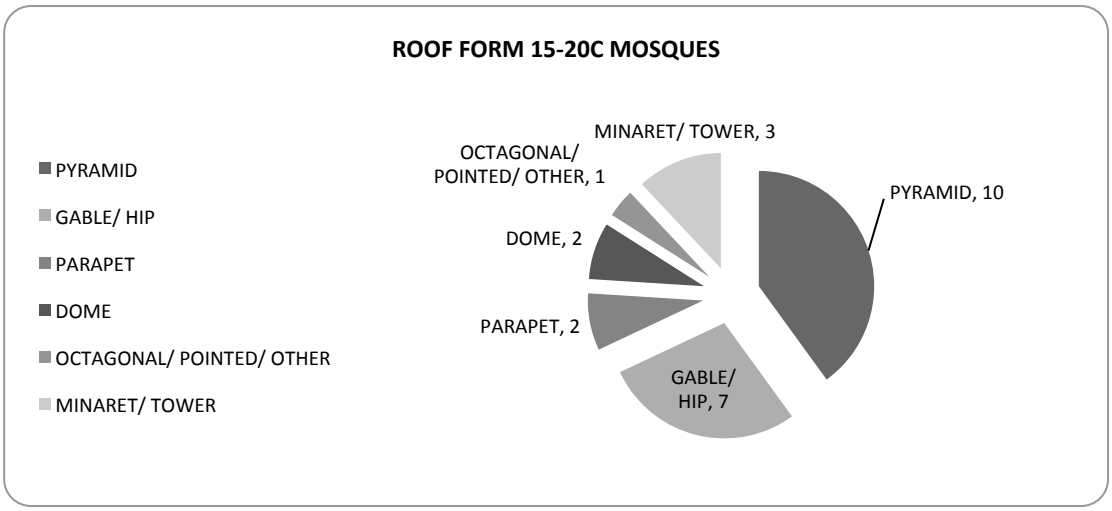
Post-18th century mosques, however, exhibit variations in the floor plan forms adopted. Octagonal and hybrid shapes appeared mainly in the mosques belonging to the sultans. Masjid Zahir and Masjid Azizi, for example, employ an octagonal form within a square, with rectangular extensions. Masjid Pulau Penyengat has an octagonal within a square, with circular forms adjoining the square at the corners and forming a hybrid floor plan.

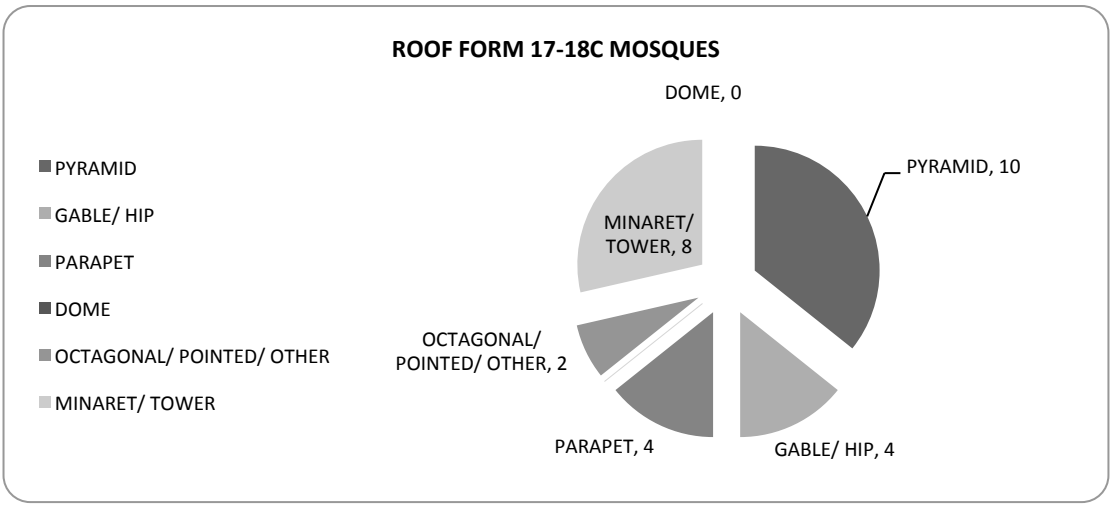
- **Wall Openings**

The design of the wall openings (i.e., windows, doors, etc.) in the mosques witnessed a considerable change of styles at the beginning of the 17th century. Along with the usual rectangular forms of doors and windows, the 17th–20th century mosques have more circles, round tops and ogee forms in their openings.

- **Roof Forms**

The dominant feature of roof forms for the 15th and 16th century mosques is the pyramidal roof, which usually comes in tiers from two to five. This information is consistent with the data analysis in which the pyramidal form is employed significantly in mosques from the 15th century to the 18th century. However, significant changes are seen in the variety of forms adopted after the 16th century. The 17th and 18th century mosques used more minarets or tower like structures in their roof forms; by the 19th century the pyramidal form has reduced significantly to be replaced by domes and parapet roof lines, which usually indicate a flat roof design being employed (see Chart 5-6).





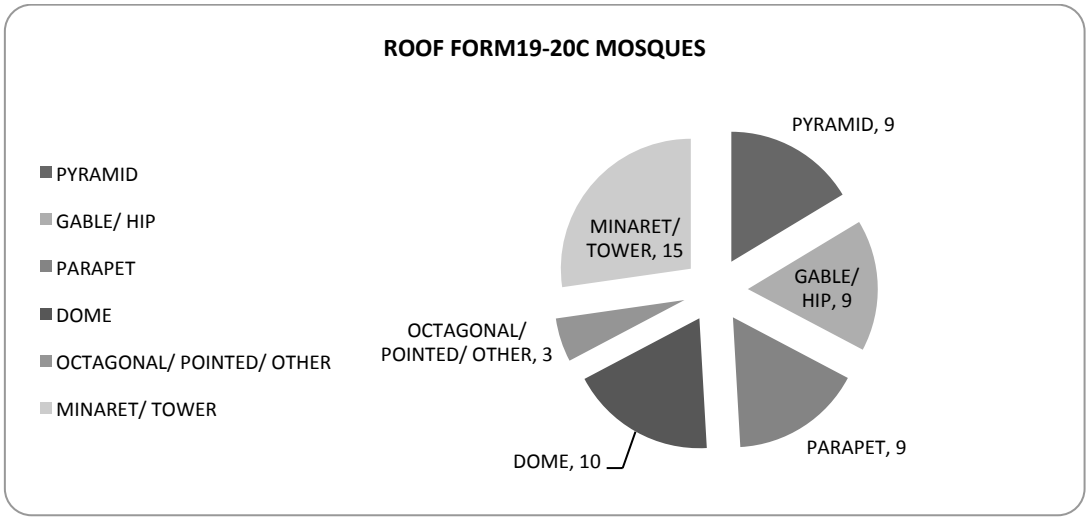
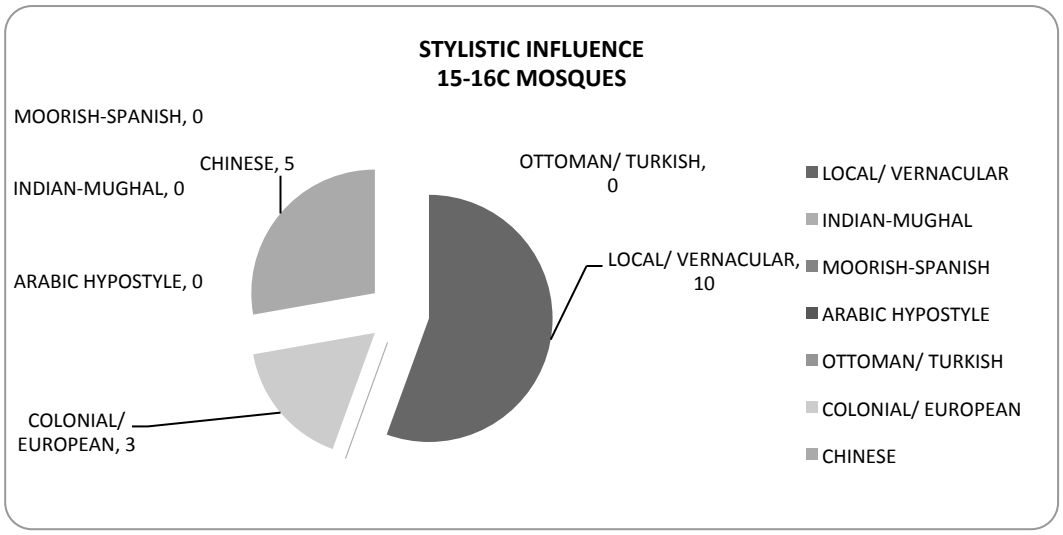


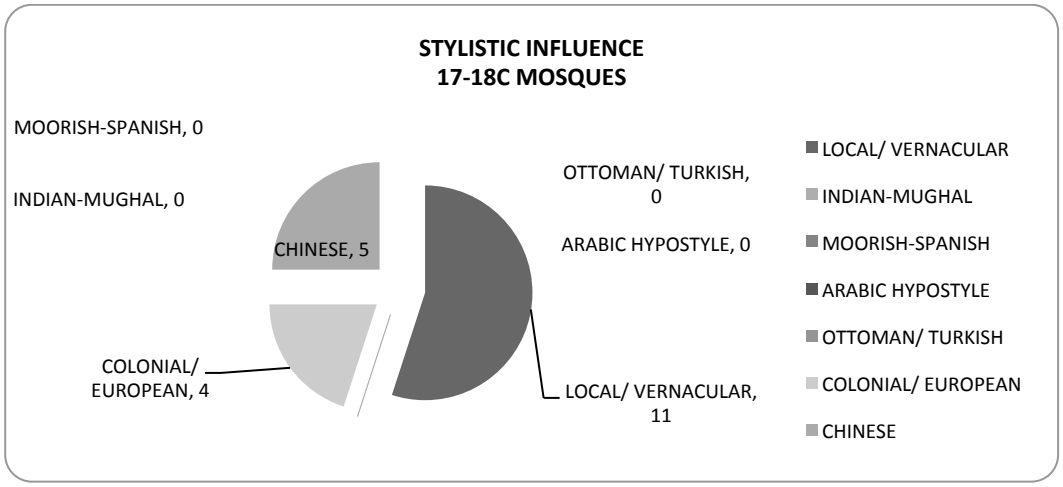
Chart 5-6 Formative aesthetics.

5.2.7 Stylistic Influence

	REF	REGION	NAME OF MOSQUE	LOCAL/ VERNACULAR	INDIAN-MUGHAL	MOORISH-SPANISH	ARABIC HYPOSTYLE	OTTOMAN/ TURKISH	COLONIAL/ EUROPEAN	CHINESE
15TH–16TH CENTURY	1	East Java	Sunan Ampel	1					1	
	2	East Java	Sendang Duwur	1					1	
	3	East Java	Sunan Giri	1						
	4	Central Java	Mantingan	1						1
	5	Central Java	Kudus	1						
	6	Central Java	Demak	1						1
	7	West Java	Agung Banten	1					1	1
	8	West Java	Cirebon Kasepuhan	1						1
	9	West Java	Panjunan	1						1
	10	Nusa Tenggara	Bayan Beleq	1						
	10	**TOTAL**		**10**	**0**	**0**	**0**	**0**	**3**	**5**
17TH–18TH CENTURY	1	Batavia/Jakarta	Kebon Jeruk	1						1
	2	Batavia/Jakarta	An-Nawier						1	
	3	Batavia/Jakarta	Al-Mansur	1					1	
	4	Batavia/Jakarta	Kg Baru	1						
	5	Nusa Tenggara	At-Taqwa	1						
	6	Sulawesi	Palopo	1						
	7	Patani	Teluk Manok	1						
	8	Malay Peninsula	Tengkera	1					1	1
	9	Malay Peninsula	Kg Hulu	1						1
	10	Malay Peninsula	Kg Laut	1						
	11	Malay Peninsula	Kg Keling	1					1	1
	12	North Maluku	M. Sultan Ternate	1						1
	12	**TOTAL**		**11**	**0**	**0**	**0**	**0**	**4**	**5**
19TH–20TH CENTURY	1	Batavia/Jakarta	Langgar Tinggi						1	1
	2	Batavia/Jakarta	Al-Makmur Cikini	1					1	
	3	Surakarta	Agung Surakarta	1	1				1	
	4	Kalimantan	Pusaka	1						
	5	Sumatera	Azizi			1		1	1	
	6	Sumatera	Pondok Tinggi	1						
	7	Riau	Pulau Penyengat	1						
	8	Irian Jaya	Patinburak	1						
	9	Malay Peninsula	Lebuh Acheh	1					1	
	10	Malay Peninsula	Sultan Abu Bakar						1	
	11	Malay Peninsula	India Perak		1					
	12	Malay Peninsula	Zahir		1	1			1	
	13	Malay Peninsula	Ubudiah		1	1			1	
	14	Malay Peninsula	Paloh	1						
	15	Malay Peninsula	Kapitan Keling		1	1			1	
	16	Malay Peninsula	Batak Rabit	1						
	17	Malay Peninsula	Surau Tok Janggut	1						
	18	Malay Peninsula	Panglima Kinta			1			1	
	19	Malay Peninsula	Langgar Kelantan	1						
	19	**TOTAL**		**11**	**5**	**5**	**0**	**1**	**10**	**1**

Table 5-12 Stylistic influence.





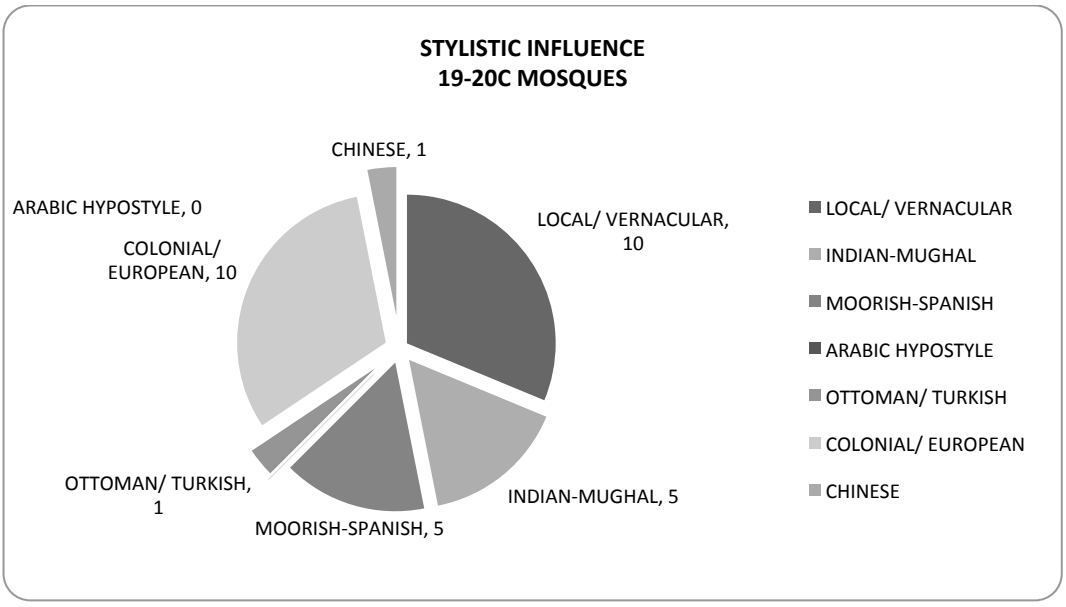


Chart 5-7 Stylistic influence.

Pre-18th century mosques were mainly built in local vernacular styles with wood being the main structural component. However, in many of these mosques, especially those built in the 15th and 16th centuries, Chinese influence was evident in the woodworks of the *mimbar* and motif stylisations seen in the forms of clouds and flowers. With the mosques of the 15th and 16th centuries as well, as time changes and extensions or renovations were required, the tendency was for these mosques to adopt Colonial or European building elements usually seen in the Doric Ionic columns or parapet design (See Chart 5-7, 15th–16th century mosques).

However, a significant change of style is evident in the post-18th century mosques when Chinese influence had almost diminished, while a variety of other styles were adopted such as the Indian-Mughal, Colonial-European and Moorish-Spanish.

Figure 5-18 Masjid Agung Demak; main door (c. 1466)
exhibiting Chinese influence in the use of motif and colours.

5.2.8 Material Aesthetics

	REF	REGION	NAME OF MOSQUE	FOUNDATION				MAIN STRUCTURAL MATERIAL				MAIN CONSTRUCTIONAL MATERIAL			
				A	B	C	D	E	F	G	H	I	J	K	L
15TH–16TH CENTURY	1	East Java	Sunan Ampel	1			1							1	
	2	East Java	Sendang Duwur	1			1							1	
	3	East Java	Sunan Giri	1			1							1	
	4	Central Java	Mantingan	1			1							1	
	5	Central Java	Kudus	1			1		1		1			1	
	6	Central Java	Demak	1			1							1	
	7	West Java	Agung Banten	1			1							1	
	8	West Java	Cirebon Kasepuhan	1			1							1	
	9	West Java	Panjunan	1			1							1	
	10	Nusa Tenggara	Bayan Beleq			1	1				1				1
	10	**TOTAL**		**9**	**0**	**1**	**10**	**0**	**1**	**0**	**2**	**0**	**0**	**9**	**1**
17TH–18TH CENTURY	1	Batavia/Jakarta	Kebon Jeruk	1					1					1	
	2	Batavia/Jakarta	An-Nawier	1					1					1	
	3	Batavia/Jakarta	Al-Mansur	1					1					1	
	4	Batavia/Jakarta	Kg Baru						1					1	
	5	Nusa Tenggara	At-Taqwa		1		1								1
	6	Sulawesi	Palopo	1			1							1	
	7	Patani	Teluk Manok		1		1					1			
	8	Malay Peninsula	Tengkera	1					1					1	
	9	Malay Peninsula	Kg Hulu	1			1							1	
	10	Malay Peninsula	Kg Laut		1		1					1			
	11	Malay Peninsula	Kg Keling	1					1					1	
	12	North Maluku	M.Sultan Ternate	1			1					1		1	
	12	**TOTAL**		**8**	**3**	**0**	**6**	**0**	**6**	**0**	**0**	**3**	**0**	**9**	**1**
19TH–20TH CENTURY	1	Batavia/Jakarta	Langgar Tinggi	1					1					1	
	2	Batavia/Jakarta	Al-Makmur Cikini	1					1					1	
	3	Surakarta	Agung Surakarta	1			1							1	
	4	Kalimantan	Pusaka		1		1					1			
	5	Sumatera	Azizi	1					1					1	
	6	Sumatera	Pondok Tinggi	1			1					1			
	7	Riau	Pulau Penyengat	1					1					1	
	8	Irian Jaya	Patinburak			1	1					1			1
	9	Malay Peninsula	Lebuh Acheh	1					1					1	
	10	Malay Peninsula	Sultan Abu Bakar	1				1						1	
	11	Malay Peninsula	India Perak	1					1					1	
	12	Malay Peninsula	Zahir	1				1						1	
	13	Malay Peninsula	Ubudiah	1				1						1	
	14	Malay Peninsula	Paloh	1			1		1					1	
	15	Malay Peninsula	Kapitan Keling					1						1	
	16	Malay Peninsula	Batak Rabit	1			1		1					1	
	17	Malay Peninsula	Surau Tok Janggut		1		1					1			
	18	Malay Peninsula	Panglima Kinta	1					1					1	
	19	Malay Peninsula	Langgar Kelantan		1		1					1			
	19	**TOTAL**		**14**	**3**	**1**	**8**	**4**	**9**	**0**	**0**	**5**	**0**	**14**	**1**

LEGEND

FOUNDATION			MAIN STRUCTURAL MATERIAL					MAIN CONSTRUCTIONAL MATERIAL			
A	B	C	D	E	F	G	H	I	J	K	L
SLAB ON GRADE	ON STILTS	OTHER	TIMBER FRAME	REINFORCED CONCRETE	CEMENT-RENDERED BRICKS	STEEL FRAME	OTHER	TIMBER	CONCRETE	PLASTERED BRICKS	OTHER

Table 5-13 Material Aesthetics.

The mosques were analysed for the types of constructional and structural materials used, and technology employed, with the results discussed below:

- **Foundation**

The analysis found that the majority of the mosques selected for the study were built with slab on grade floor directly on the ground or on a raised compacted foundation. With older mosques, the vernacular material and technology might have been used as indicated in the mosques of Bayan Beleq in Nusa Tenggara (16c) and Patinburak in Irian Jaya (19c). Bayan Beleq, for example, utilised mountain rocks laid and arranged forming a flat surface, while in Patinburak soil layered with corals formed the mosque's foundations.

The study also found that 6 out of the 41 mosques were built on stilts. These mosques were built after the 16th century and are found in Nusa Tenggara, South Thailand, Kalimantan and Malay Peninsula. All of the Javanese mosques in this survey were built directly on the ground.

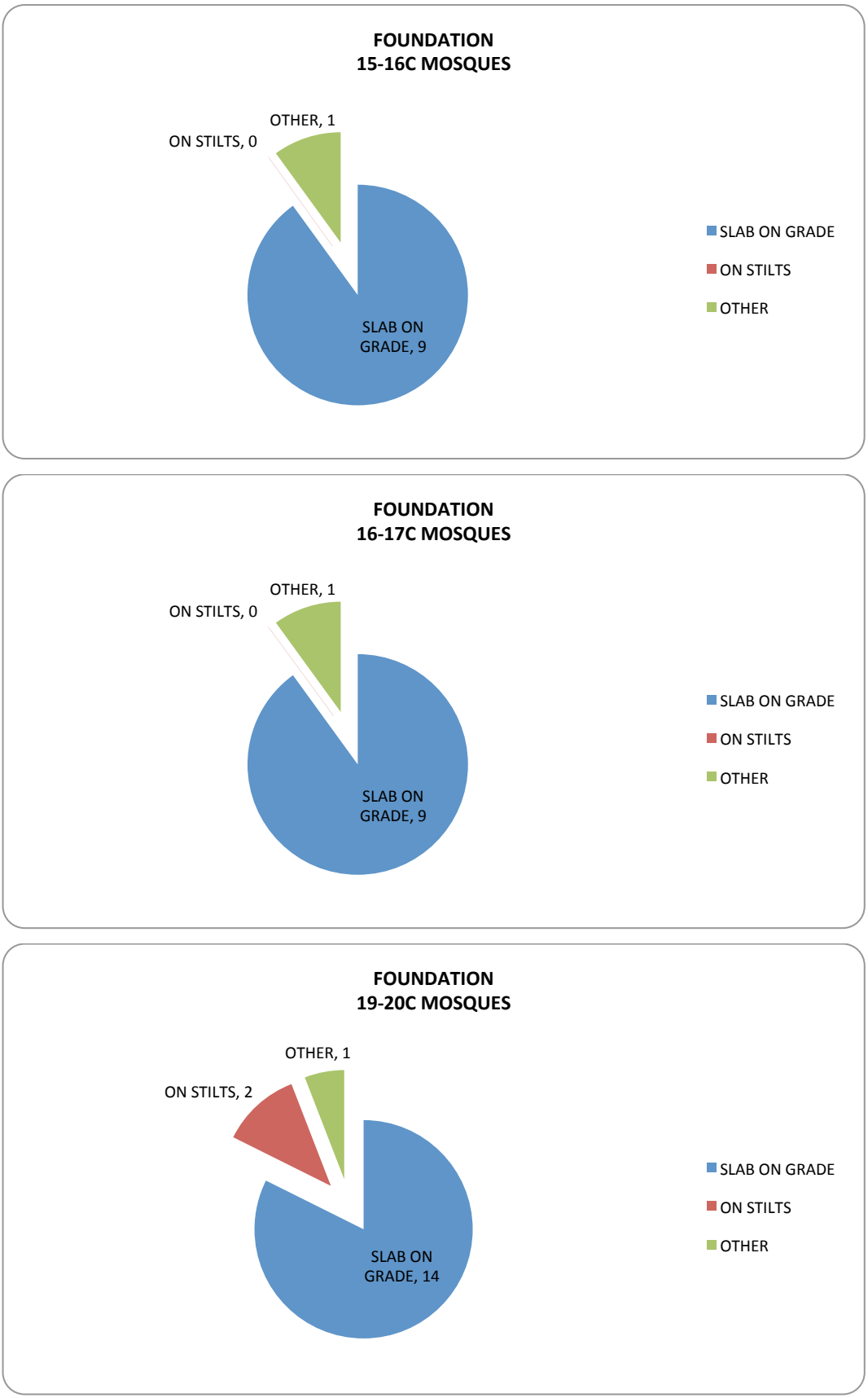


Chart 5-8 Foundation.

- **Building Heights**

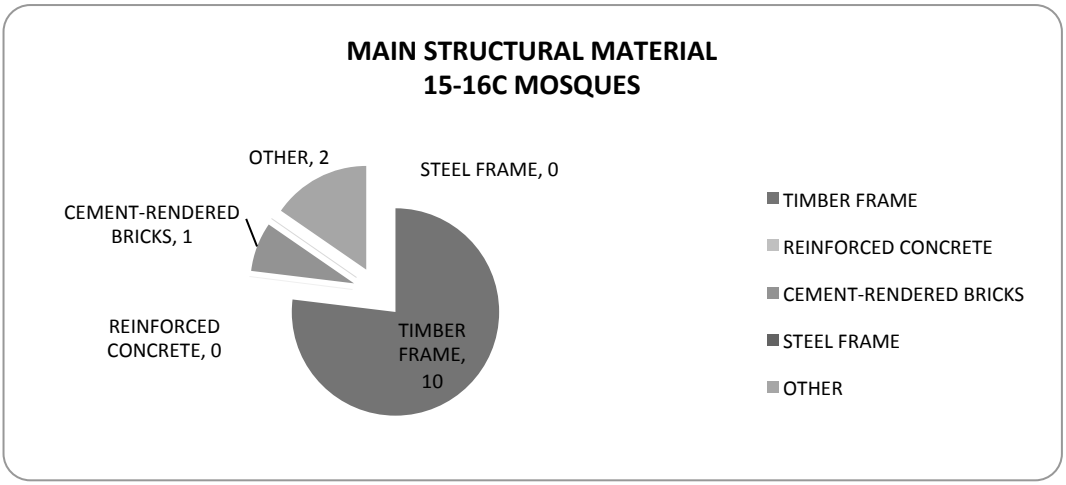
The majority of the mosques studied have a total building height of approximately two storeys or less, not including the minarets – with the exception of five mosques (two from the 15th and 16th centuries, one from the 17th and 18th centuries and two from the 19th and 20th centuries), which have a total building height of more than two storeys. These mosques are all sultanate or ruler's mosques. None of the mosques has a second floor (used for additional functions), with the exception of Masjid Agung Banten (16c), which has two-storey *Tiyamah* buildings next to the main hall as meeting places and *madrasah*.

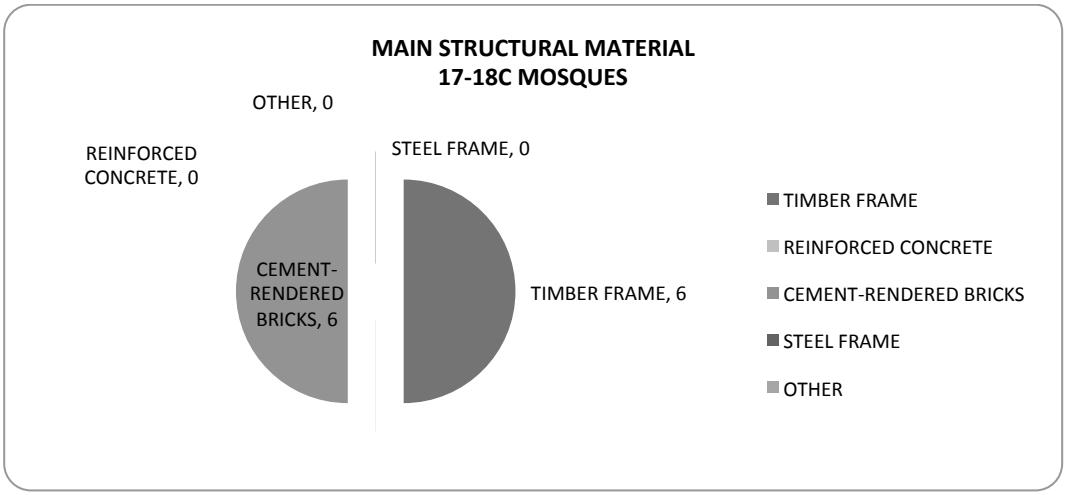
- **Main Structural Material (see Chart 5-9)**

Pre-19th century mosques are found to have mainly used wood as the main structural elements. The 15th and 16th century mosques especially employed wooden structural frames from body to roof, using the *soko guru* (main central pillars) construction supporting the roof frame while leaving the walls to be non-loadbearing. Composite building technologies, however, are found in Masjid Kudus (16c). Apart from the *soko guru* configuration, the old part of the mosque also used exposed terracotta bricks in the construction of the minaret, walls surrounding the mosque and tomb, and the external and internal gateways *(gapura)*.

The 17th and 18th century mosques have begun using cement-rendered brickworks as loadbearing walls, although fifty percent of the mosques in the period were still built using the traditional structural configuration, combining the wooden frame structure with cement-rendered bricks walls. Masjid Teluk Manok and Patani, however, retained the usage of wood both in structure and wall panels. All of the mosques of this period that were built in Jakarta were found to have used mainly cement-rendered brick construction.

In the 19th and 20th century, the use of wood in the mosques was significantly reduced. Reinforced concrete started to be introduced and used in the pillars of four mosques – all located on the Malay Peninsula. The walls, however, retained cement-rendered bricks or block-works construction.





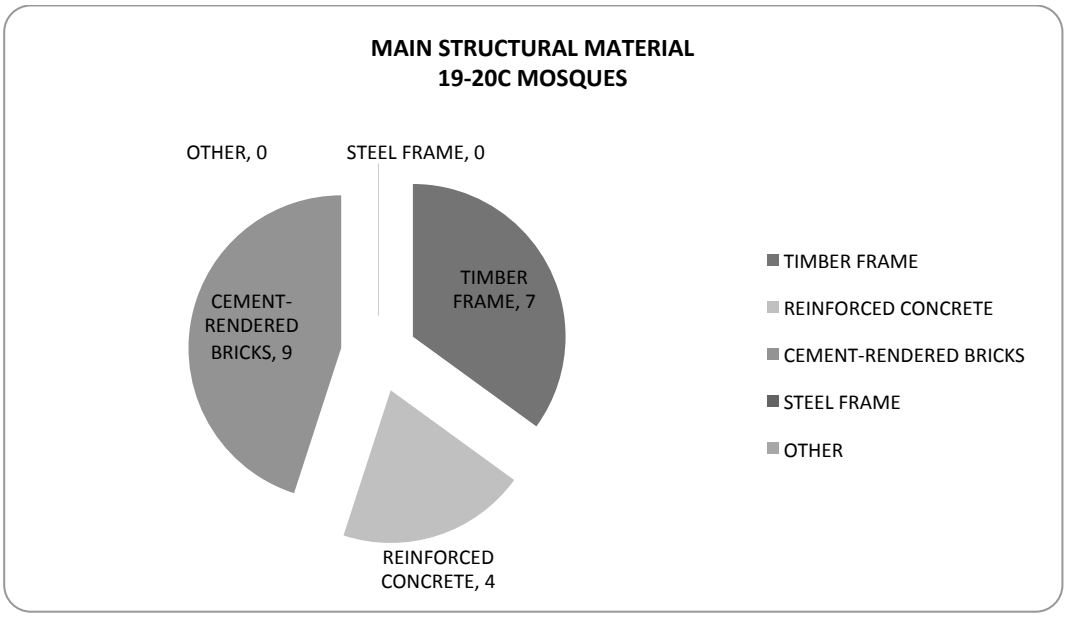
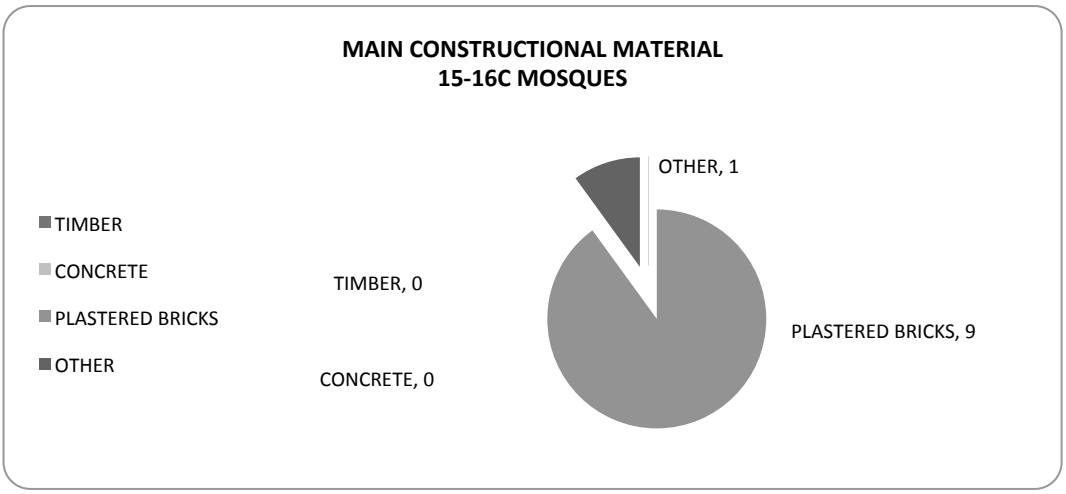
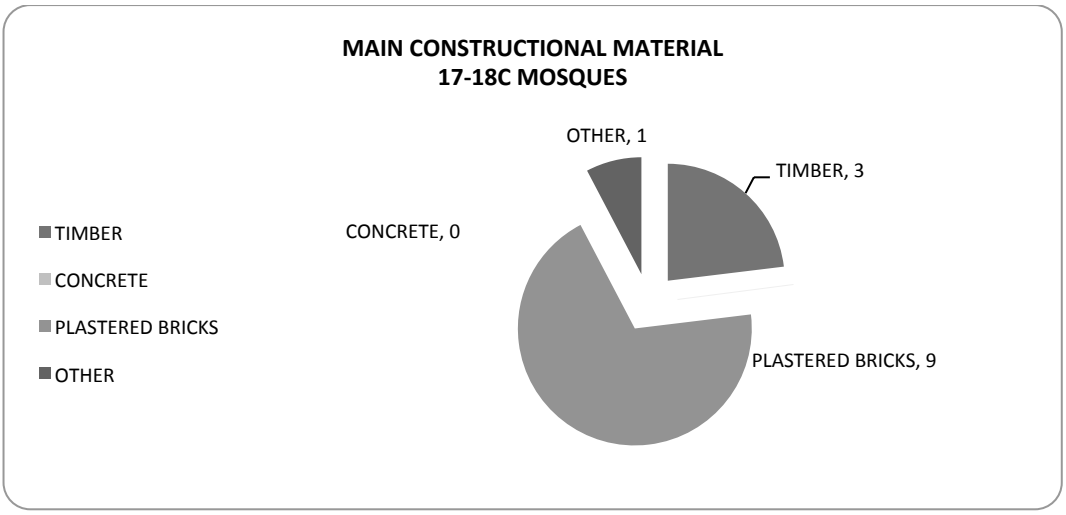


Chart 5-9 Main structural material.

- **Main Constructional Material (see Chart 5-10)**

As mentioned above, the mosques surveyed generally have walls built using cement-rendered techniques or plastered bricks or block-works. It is believed that this technique must have been used as a replacement for traditional materials that could have perished with time. This is indicated in older mosques, which still retained the original materials, especially those in the eastern part of the archipelago. Bayan Beleq (16c) has woven bamboo strips as the wall panels, while At-Taqwa (17c) has nypa leaves. Patinburak (19c) was built with timber frame holding woven bamboo wall panels, which were plastered then finished with lime-mixed paint.





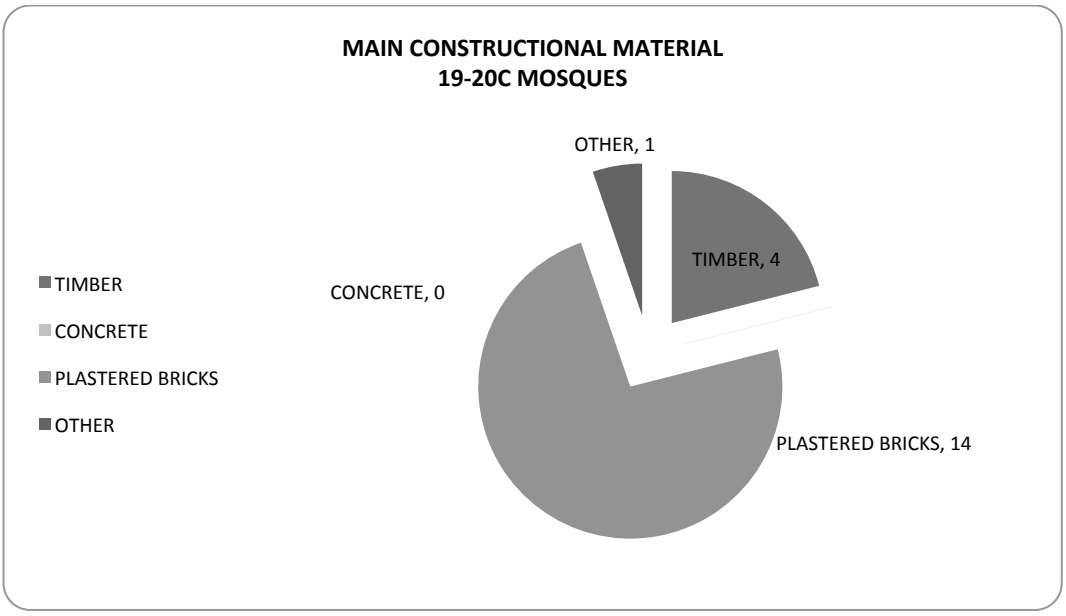


Chart 5-10 Main constructional material.

5.2.9 Decorative Elements

The survey looks for decorative elements in mosques, both ornamental and architectural. Two dimensional decorations are often found applied on structural elements such as columns and beams, as well as interior and exterior surfaces such as the walls and floors. They include carvings, ceramic works, paintings or illustrations that utilise techniques and colours that could be studied for their origins and influences.

Three-dimensional decorations are found in the design of gateways, and any 3D figurative or non-figurative artworks. The motifs used are studied based on the types known such as geometric pattern, floral-vegetal, zoomorphic and cosmos. The survey also looked for decorative schemes in typical mosque elements such as *mimbar* and *mihrab.* The decorative aspect of the mosque, in particular its range of motifs and applications, is not discussed in detail in the present study, as it is tangential to the scope of inquiry.

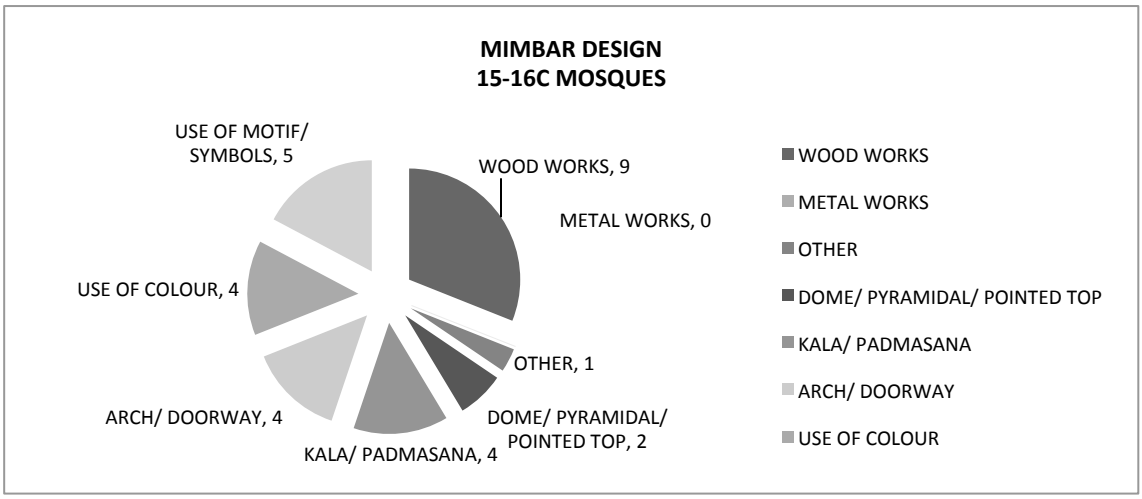
5.2.9.1 The *Mimbar* and the *Mihrab*

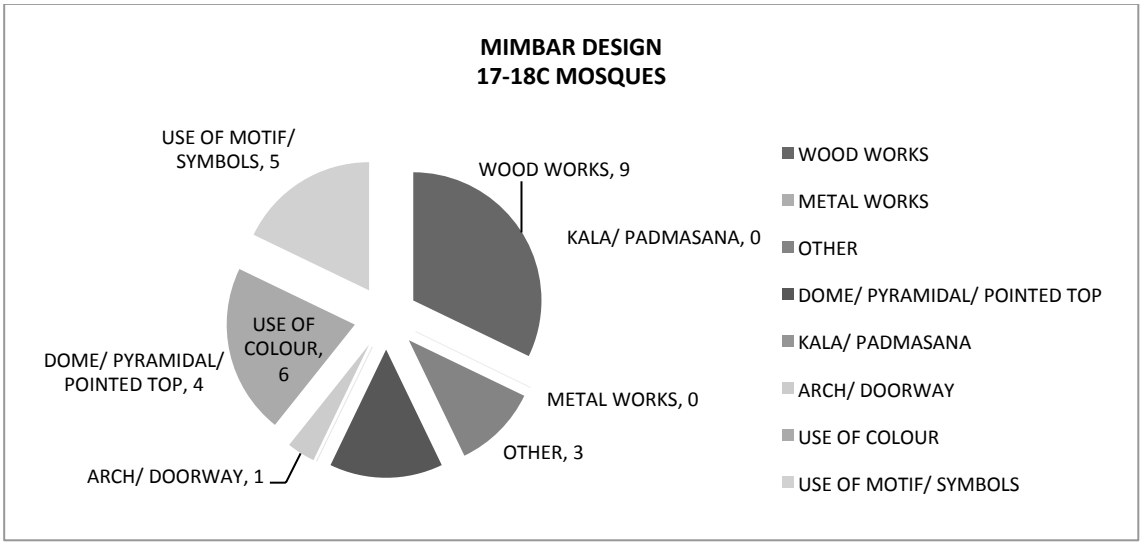
	REF	REGION	NAME OF MOSQUE	DECORATIVE ELEMENTS													OTHER
				MIHRAB					MIMBAR								
				A	B	C	D	E	F	G	H	I	J	K	L	M	
15TH–16TH CENTURY	1	East Java	Sunan Ampel	1		1			1			1			1		
	2	East Java	Sendang Duwur		1		1	1	1				1	1		1	
	3	East Java	Sunan Giri		1		1		1				1	1	1	1	
	4	Central Java	Mantingan	1	1		1		1			1			1		
	5	Central Java	Kudus	1			1				1			1			
	6	Central Java	Demak	1			1		1				1	1		1	1
	7	West Java	Agung Banten		1		1		1						1		
	8	West Java	Cirebon Kasepuhan	1	1		1		1								
	9	West Java	Panjunan	1				1	1				1			1	
	10	Nusa Tenggara	Bayan Beleq						1							1	
	10	**TOTAL**		**6**	**5**	**1**	**7**	**2**	**9**	**0**	**1**	**2**	**4**	**4**	**4**	**5**	**1**
17TH–18TH CENTURY	1	Batavia/Jakarta	Kebon Jeruk														
	2	Batavia/Jakarta	An-Nawier		1	1	1	1	1			1			1	1	
	3	Batavia/Jakarta	Al-Mansur			1					1	1		1			
	4	Batavia/Jakarta	Kg Baru				1				1						
	5	Nusa Tenggara	At-Taqwa		1	1			1								
	6	Sulawesi	Palopo			1			1							1	
	7	Patani	Teluk Manok						1			1					
	8	Malay Peninsula	Tengkera	1			1		1						1	1	
	9	Malay Peninsula	Kg Hulu	1					1			1			1	1	
	10	Malay Peninsula	Kg Laut						1						1		
	11	Malay Peninsula	Kg Keling	1			1		1						1		
	12	North Maluku	M. Sultan Ternate					1	1		1				1	1	1
	12	**TOTAL**		**3**	**2**	**4**	**4**	**2**	**9**	**0**	**3**	**4**	**0**	**1**	**6**	**5**	**1**
19TH–20TH CENTURY	1	Batavia/Jakarta	Langgar Tinggi		1		1		1			1		1			
	2	Batavia/Jakarta	Al-Makmur Cikini				1		1			1			1		1
	3	Surakarta	Agung Surakarta	1	1		1		1								
	4	Kalimantan	Pusaka	1		1			1					1	1	1	1
	5	Sumatera	Azizi	1	1	1			1			1			1	1	
	6	Sumatera	Pondok Tinggi	1		1	1		1			1				1	1
	7	Riau	Pulau Penyengat		1	1			1			1			1	1	
	8	Irian Jaya	Patinburak				1										
	9	Malay Peninsula	Lebuh Acheh	1			1		1						1		
	10	Malay Peninsula	Sultan Abu Bakar		1		1			1							
	11	Malay Peninsula	India Perak	1	1		1		1			1					
	12	Malay Peninsula	Zahir		1		1		1			1		1	1		
	13	Malay Peninsula	Ubudiah	1			1	1	1			1					
	14	Malay Peninsula	Paloh				1		1						1	1	
	15	Malay Peninsula	Kapitan Keling	1	1		1		1							1	
	16	Malay Peninsula	Batak Rabit						1								
	17	Malay Peninsula	Surau Tok Janggut	1													
	18	Malay Peninsula	Panglima Kinta		1	1	1		1					1			
	19	Malay Peninsula	Langgar Kelantan						1						1		
	19	**TOTAL**		**9**	**9**	**5**	**13**	**1**	**16**	**1**	**0**	**8**	**0**	**4**	**8**	**6**	**3**

LEGEND

MIHRAB					MIMBAR							
A	B	C	D	E	F	G	H	I	J	K	L	M
DECORATED WALL	COLUMNS/ PILASTER/ MOULDING	DOME/ CUPOLA/ POINTED	ARCH	OTHER	WOOD WORKS	METAL WORKS	OTHER	DOME/ PYRAMIDAL/ POINTED TOP	KALA/ PADMASANA	ARCH/ DOORWAY	USE OF COLOUR	USE OF MOTIF/ SYMBOLS

Table 5-14 The *Mimbar* and the *Mihrab*.





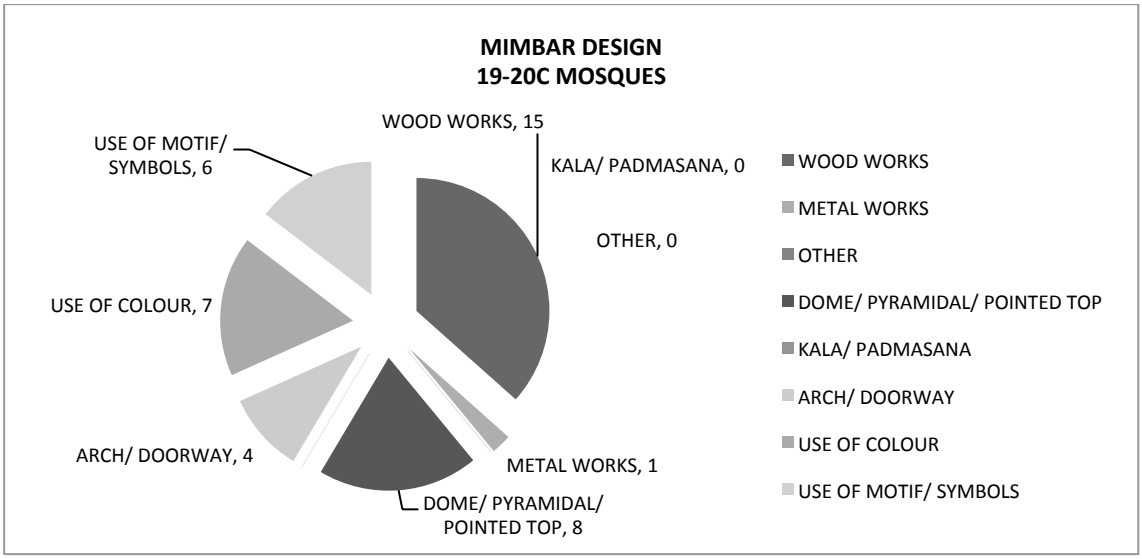


Chart 5-11 Mimbar Design.

Based on the analysis of the mosques' *mimbars*, the study found that the majority of the *mimbars* in the mosques selected are made from wood and are movable rather than fixed, with the exceptions of a few mosques such as Masjid Menara Kudus (15c), Al-Mansur (18c) and Kampung Baru (18c). All of these mosques have inbuilt *mimbars.* In the case of Masjid Menara Kudus (Figure 5-19) and Kampung Baru (Figure 5-20), the *mimbar* is built in the *qibla* wall next to the *mihrab* in the form of niches in the wall. Both of these *mimbars* are new additions. Kampung Baru's original *mimbar* was made of wood with fine woodcarvings and is currently displayed in Historical Museum Jakarta. However, the studies have not found any information on the original *mimbar* of Kudus.

SOURCE: MASJID 2000

Figure 5-19 The *mimbar* and *mihrab* of Masjid Sunan Kudus.

Figure 5-20 *Mimbar* and *mihrab* of Masjid Kampung Baru.

Masjid Al-Mansur has an inbuilt *mimbar* that protrudes at an angle from the western wall of the mosque. It is in the form of an entranceway with two pilasters on the sides of the entrance and arched top. The structure is decorated with a dome on top of it, with white and green paint finishes (Figure 5-21). Sultan Abu Bakar's *mimbar* is made from cast iron with decorative ironworks. It is made of two levels, with more than 10 steps of stairs before one reaches the seat, which is placed on the upper level of the *mimbar*. A bronze clock decorates the top centre part of the *mimbar*. This *mimbar* is said to be imported from Turkey (Figure 5-22).

Figure 5-21 The *mimbar* of Masjid Al-Mansur.

An interesting feature in some of the *mimbars* of the 15th and 16th centuries is the *kala* or *padmasana* design, which is found in four of the old mosques. The *mimbar* is designed in the form of a *padmasana* or throne (as it is known in Hindu culture), with four posts supporting a stylised kala with curled ends forming an arch to the entrance of the *mimbar*. This design is found in Sendang Duwur, Giri, Demak and Panjunan. By the 16th century, however, none of the *mimbars* were designed in the same style.

Figure 5-22 The *mimbar* of Masjid Sultan Abu Bakar.

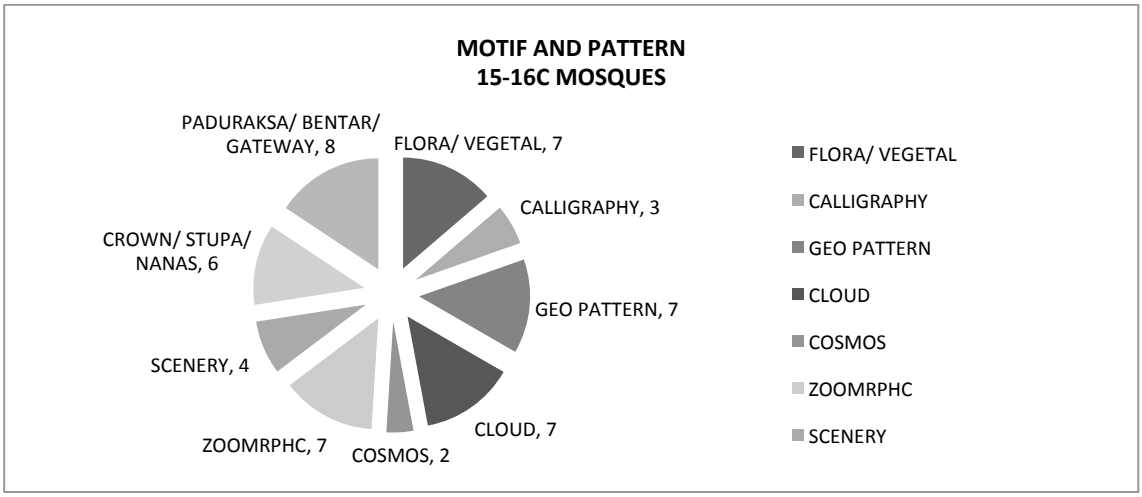
The *mihrab* design is rather typical. It is usually in the form of a niche in the *qibla* wall, with a door like entrance. From outside, the *mihrab*'s position is recognised from the protruding feature on the external portion of the *qibla* wall. The *mihrab*'s opening is often the size of a doorway, approximately less than a meter wide, and less than two meters high. It sometimes comes in the form of an arched top doorway, with ornamentation placed above the opening, or around it on the sides. At times, the sides of

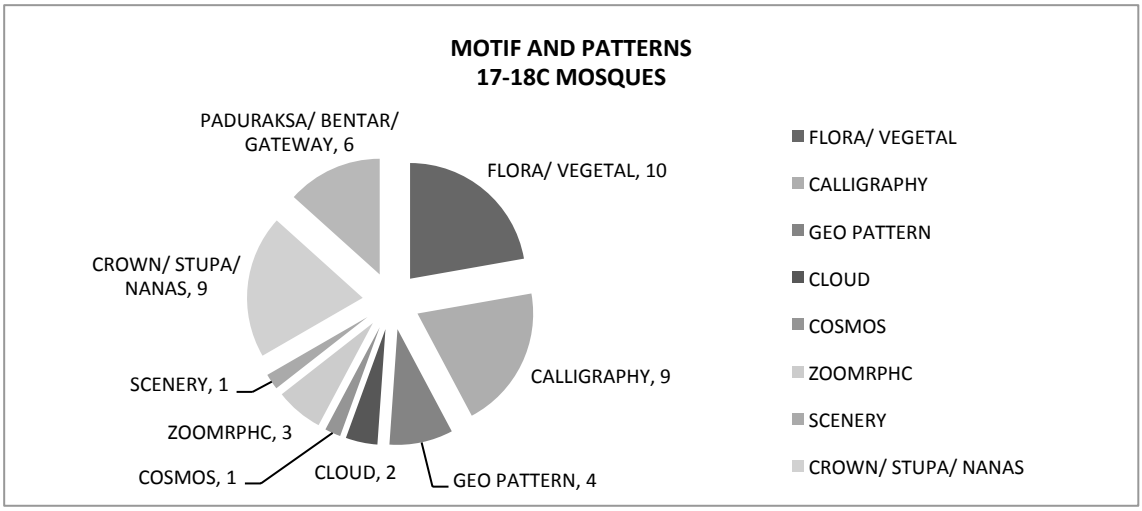
the entrances are decorated with pilasters, made of marble or plaster. The ceiling space of some *mihrabs* is designed to form a cone, cupola or dome.

5.2.9.2 Motifs and Patterns

	NOS	REGION	NAME OF MOSQUE	FLORA/ VEGETAL	CALLIGRAPHY	GEO PATTERN	CLOUD	COSMOS	ZOOMRPHC	SCENERY	CROWN/ STUPA/ NANAS	PADURAKSA/ BENTAR/ GATEWAY
15TH–16TH CENTURY	1	East Java	Sunan Ampel	1							1	1
	2	East Java	Sendang Duwur	1		1	1		1	1	1	1
	3	East Java	Sunan Giri		1	1	1				1	1
	4	Central Java	Mantingan	1		1	1		1	1	1	1
	5	Central Java	Kudus	1	1	1			1	1		1
	6	Central Java	Demak	1	1		1	1	1		1	1
	7	West Java	Agung Banten			1	1					1
	8	West Java	Cirebon Kasepuhan	1		1	1	1	1			
	9	West Java	Panjunan			1	1		1	1	1	1
	10	Nusa Tenggara	Bayan Beleq	1					1			
	10	**TOTAL**		**7**	**3**	**7**	**7**	**2**	**7**	**4**	**6**	**8**
17TH–18TH CENTURY	1	Batavia/Jakarta	Kebon Jeruk	1								
	2	Batavia/Jakarta	An-Nawier	1	1				1		1	1
	3	Batavia/Jakarta	Al-Mansur	1	1						1	
	4	Batavia/Jakarta	Kg Baru		1							
	5	Nusa Tenggara	At-Taqwa						1		1	
	6	Sulawesi	Palopo	1	1				1		1	1
	7	Patani	Teluk Manok	1	1	1						
	8	Malay Peninsula	Tengkera	1	1	1					1	1
	9	Malay Peninsula	Kg Hulu	1	1	1	1				1	1
	10	Malay Peninsula	Kg Laut	1							1	
	11	Malay Peninsula	Kg Keling	1	1	1					1	1
	12	North Maluku	M.Sultan Ternate	1	1		1	1		1	1	1
	12	**TOTAL**		**10**	**9**	**4**	**2**	**1**	**3**	**1**	**9**	**6**
19TH–20TH CENTURY	1	Batavia/Jakarta	Langgar Tinggi	1							1	
	2	Batavia/Jakarta	Al-Makmur Cikini									
	3	Surakarta	Agung Surakarta	1	1	1			1			1
	4	Kalimantan	Pusaka	1		1						
	5	Sumatera	Azizi	1	1	1						
	6	Sumatera	Pondok Tinggi	1		1			1		1	
	7	Riau	Pulau Penyengat	1								1
	8	Irian Jaya	Patinburak		1							
	9	Malay Peninsula	Lebuh Acheh	1								
	10	Malay Peninsula	Sultan Abu Bakar	1								
	11	Malay Peninsula	India Perak	1	1	1						1
	12	Malay Peninsula	Zahir	1	1	1						
	13	Malay Peninsula	Ubudiah	1	1	1						
	14	Malay Peninsula	Paloh		1							
	15	Malay Peninsula	Kapitan Keling	1	1			1				1
	16	Malay Peninsula	Batak Rabit		1							
	17	Malay Peninsula	Surau Tok Janggut	1	1							
	18	Malay Peninsula	Panglima Kinta	1	1						1	
	19	Malay Peninsula	Langgar Kelantan	1	1						1	
	19	**TOTAL**		**15**	**12**	**7**	**0**	**1**	**2**	**0**	**4**	**4**

Table 5-15 Motifs and Patterns.





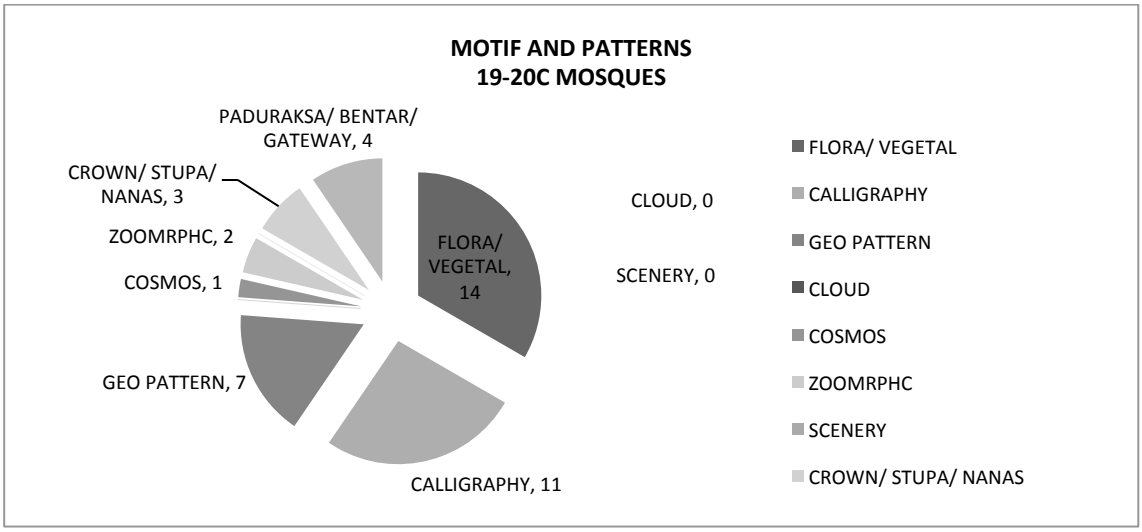


Chart 5-12 Motifs and Patterns.

In general, the study found that the most artistic period was the 15th and 16th centuries, when mosques exhibited a variety of motifs and techniques of execution (Chart 5-12). During this period, most decorative applications were concentrated on structural items such as the beams and columns, as well as the *mimbar*. The 15th to the 16th centuries also witnessed the widespread use of ancient motifs such as scenery, zoomorphic, cosmos, crown-stupa-nanas and cloud. However, this pattern gradually decreased in the 17th and 18th centuries. By the end of the 19th century, basically all ancient artistic traditions had diminished, only to be replaced by more Islamic motifs such as calligraphy, floral-vegetal and geometric pattern.

5.2.9.3 General Observations on Artistic Traditions in Mosques

Based on the visual survey and archival studies conducted, decorations in Island Southeast Asian mosques were mainly concentrated in structural elements and *mimbars*. As vernacular mosques have non-loadbearing walls, they were susceptible to being replaced. In many cases, change was necessary, as vernacular materials such as wood tend to rot. During the fieldtrip to Masjid Sendang Duwur, pieces of old wood panellings for the mosque's wall were still kept under a *cungkup* in the mosque's compound (see Chapter 4 Figure 4-20). However, evidence of traditional wood carving can still be seen in extant *mimbars*, such as in Masjid Agung Cirebon Kasepuhan (Figure 5-23). Similarly, tombs of venerated individuals are usually placed in a covered structure with intricate woodcarving panelings (see Chapter 4 Figure 4-21).

Figure 5-23 The *mimbar* of Masjid Agung Cirebon Kasepuhan.

The findings suggest that while the *mimbar* has been acknowledged from the earliest time as being an important mosque component (as evident from surviving samples and documentary evidence), there is little to suggest that the *mihrab* and the *qibla* wall were given the same significance. The only mosque considered to have a significant *mihrab* is Masjid Agung Cirebon. It has intricate detailing with sculptured pilasters topped with lotus buds supporting a curved-form portal with surya Majapahit emblem at the centre and curled clouds trimming (Figure 5-24).

Figure 5-24 The *mihrab* of Masjid Agung Cirebon Kasepuhan.

Other decorative elements of the mosques are found in the Annamese ceramic tiles of Masjid Agung Demak (Figure 5-25), Masjid Menara Kudus (Figure 5-26) and Masjid Merah Panjunan (Figure 5-27). Although the method of covering a wall with decorative tiles definitely finds its origins in the Islamic building tradition, the tiles fixed to the mosque's walls are spaced out almost evenly instead of forming a continuous pattern, as was known in the Islamic tradition. Such a practice (in which decorative tiles are fixed to the walls like medallions) is also found in the walls of Masjid Mantingan, and is believed to have been inherited from pre-Islamic traditions of temple decorations (Hall 2000; Iswahyudi 2007). In Masjid Mantingan, however, instead of ceramic tiles we found coral-carved panels decorating the entry façade of the prayer hall (Figure 5-28).

PHOTO CREDIT: ALI AKBAR

Figure 5-25 Annamese tiles on the entrance wall of Masjid Agung Demak.

PHOTO CREDIT: ALI AKBAR

Figure 5-26 Ceramic tiles arranged in medallion pattern on the body of the minaret at Masjid Menara Kudus.

Figure 5-27 Ceramic tiles embedded in the walls of Masjid Merah Panjunan, Cirebon.

The use of ceramic tiles as a continuous decorative surface was only evident in the 18th century with the import of Chinese tiles, made available by Chinese contractors working under European trading companies. The Melakan mosques of Tengkera, Kampung Hulu and Kampung Keling served as evidence of the mass production (or import) of ceramic tiles bearing Chinese designs and motifs. Similar ceramic tiles were often found used in Melakan townhouses built by the Chinese during that period (Figure 5-29). By the 20th century, modern mosques such as Masjid Zahir, Masjid Azizi, Masjid Ubudiah, Masjid Kapitan Keling and Masjid India Perak began using decorative tiles with 'Islamic' geometric patterns.

Figure 5-28 Decorative coral panels at Masjid Mantingan, Jepara.

LEFT: TILES FOUND IN MELAKAN TOWNHOUSE (SOURCE: FEE, 1998, P. 2); RIGHT: TILES DECORATING LINTELS IN MASJID TENGKERA, MELAKA

Figure 5-29 Ceramic tiles used in Melaka in the 18th century.

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In the early mosques, calligraphy as a decorative art was seen only in Masjid Sunan Giri (see Chapter 1, Figure 1-13 to 1-16). In other mosques, the Arabic scripts were mainly used as inscription to convey certain information regarding the building. This pattern continued even in post-18th century mosques. Calligraphic panels often exist in loose furnishings, such as a wooden divider of Masjid Agung Cirebon Kasepuhan (Figure 5-30) and wooden panels attached to the mosques' walls. Only in 20th century modern mosques did calligraphy begin to be integrated as an architectural element of the mosque, as seen in Masjid Ubudiah's ceiling decoration (Figure 5-31). Yet in these modern mosques, the application of calligraphy is often the product of foreign craftsmen consigned to execute the artistic work.

Figure 5-30 Movable wooden screen richly carved with calligraphy of verses from the *Qur'an*.

Figure 5-31 Calligraphy arranged in geometric layout decorating the ceiling of Masjid Ubudiah.

5.3 Results of Analysis

The outcome of the analysis demonstrates peculiar characteristics of mosques in Island Southeast Asia pertaining to their design elements, typology and aesthetic preferences.

5.3.1 Distinctive Characteristics of Island Southeast Asian Mosques

The analytical typology studies indicate that the mosques in Island Southeast Asia share several distinctive characteristics, regardless of their geographical location and chronological period. Based on the analysis on compositional attributes and design elements, the salient features of the mosques are:

- Fences and gateways marking the mosque's compound

A total of 39 out of 41 mosques analysed have fences and gateways marking the entry to the mosque's compound (see Chapter 5.2.3). The presence of the fences and gateways indicated that the Muslims in this region understood the fundamental requirement of demarcating between the sacred and profane zones (see Chapter 3.2.4.1). In some mosques, such as Bayan Beleq (15c) and At-Taqwa (17c), the *haram* or *rihab* area is marked by a change in levels instead of using fences. In tomb and sultanate mosques, the use of heights (i.e., by placing the mosques on higher grounds) in addition to the fences also served the purpose of further exalting the sanctity of the sacred zone.

- Semi-open structures (*serambi*, *anjung/ pendopo*, *wakaf*)

In addition to the main building, 34 out of 41 mosques have additional structures attached to the main hall (see Chapter 5.2.5). These structures come in the form of a *serambi* (veranda) or *anjung/pendopo* (porch), although in general they are often referred to just as *serambi*. *Serambis* are usually located to the north and south of the main hall, and often serve as extended prayer spaces. When placed to the south of the prayer hall, the *serambi* functions as an entrance porch as well as a social space for non-ritual meetings.

In some mosques, such as Masjid Kampung Laut (18c) and Masjid Pulau Penyengat (19c), detached covered structures called *wakaf* are provided for resting areas in the compound of the mosques. In Javanese mosques, the presence of *cungkup* is dedicated for shading burial places of dignitaries.

- Open spaces surrounding the main building

Thirty of the mosques analysed are detached buildings with ample open spaces surrounding the main building (see Chapter 5.2.3). The pattern is especially detected in vernacular mosques, as it also persists in mosques built during the colonial rule of 19th and 20th centuries.

- Water element

In total, 29 out of 41 mosques are found to incorporate water elements in their design. Various treatments were found; some are pure pragmatic functional solutions while others incorporate aesthetic considerations. See Chapter 5.2.3 for detail analysis.

- Cemetery as part of landscape

It was also found that 28 out of 41 mosques incorporated cemeteries as part of their landscape components (see Chapter 5.2.3). This pattern is particularly evident in mosques of *tajug* prototype, although it is also found to prevail in other mosque types.

- Pyramidal, gable and hip roofs, often built in tiers

In total, 29 out of 41 mosques surveyed have a combination of pyramidal, gable and hip roofs (see Chapter 5.2.6). This is a distinguishing feature of Island Southeast Asian vernacular architecture, well recognized for its outstanding roof designs (see Chapter 1.2). Although this pattern persisted well into the 20th century, the popularity of the pyramidal roof drastically declined by the middle of the century (see Chart 5-6).

- Square or rectangular floor plans

We found that 39 out of 41 mosques have square or rectangular floor plans (see Chapter 5.2.6). This design arrangement conforms to the functional requirements

of congregational prayers as indicated by the Prophet's Mosque (see discussions in Chapter 3). Hybrid floor plans are only evident in the 19th and 20th century mosques. Mosques such as Masjid Azizi, Masjid Zahir, Masjid Ubudiah and Masjid Pulau Penyengat were built with central domes that required structural columns to support them, thus creating octagonal within square spaces that disrupt the flow of the *saf*.

- No internal courtyard

None of the mosques in Island Southeast Asia have internal courtyards, as found in the Prophet's Mosque prototype (see Chapter 5.2.3).

- Minaret is not an essential functional or aesthetical element

Minarets only appeared consistently in the mosques of the 19th and 20th centuries. Prior to this period, minarets were often built as a detached structure from the main building. Their architectural language and materials were also found to differ from the main buildings of the mosques. This is partly due to the fact that the structural configuration of vernacular mosques do not allow for projection of tower structures from the roof lines without affecting the structural integrity of the roof frame. In addition, the function of a minaret (i.e. as a place to summon people to the mosque) is adequately performed by the *beduk* being placed in the *serambi.* Similarly, in traditional mosques, adhan was also proclaimed from the *serambi* area. This topic is elaborated on in the discussions pertaining to vernacular mosque typology, specifically in Chapter 6.2.4.3.

- Minimum ornamentation

In general, the mosques in Island Southeast Asia are found to have minimum decorative elements incorporated into their design schemes. Not only are their applications found to be limited, but the range of materials used for decorative purposes are also limited. The most decorative element of the mosque is the *mimbar*, where the traditional art of woodcarving is mostly expressed (see Chapter 5.2.9.1). The *mihrab* and *qibla* wall are found to be generally plain and uninteresting. With the exception of the *mihrab* of Masjid Agung Cirebon Kasepuhan (15c), which is built in creamy white marble with sculptural elements such as lotus buds (see Figure 5-24), no other mosques in Island

Southeast Asian prior to the 20th century demonstrated the significance of *mihrab* and *qibla* wall.

5.3.2 Mosque Typology Based on Primary Functions

TYPOLOGY BY FUNCTION	SULTANATE	COMMUNITY	TOMB
15TH–16TH CENTURY	Masjid Agung Demak Masjid Agung Banten Masjid Agung Cirebon K.	Masjid Merah Panjunan Masjid Bayan Beleq	Masjid Sunan Ampel Masjid Sendang Duwur Masjid Sunan Giri Masjid Mantingan Masjid Sunan Kudus
17TH–18TH CENTURY	Masjid At-Taqwa Masjid Palopo Masjid Sultan Ternate	Masjid Kebon Jeruk Masjid An-Nawier Masjid Al-Mansur Masjid Kampung Baru Masjid Teluk Manok Masjid Tengkera Masjid Kampung Hulu Masjid Kampung Laut Masjid Kampung Keling	
19TH–20TH CENTURY	Masjid Agung Surakarta Masjid Azizi Masjid Pulau Penyengat Masjid Sultan Abu Bakar Masjid Zahir	Masjid Langgar Tinggi Masjid Al-Makmur Cikini Masjid Pusaka Masjid Pondok Tinggi Masjid Patinburak Masjid Lebuh Acheh Masjid India Perak Masjid Paloh Masjid Kapitan Keling Masjid Batak Rabit Surau Tok Janggut Masjid Panglima Kinta	Masjid Ubudiah Masjid Langgar Kelantan

Table 5-16 Mosque Typology by Function.

Based on analysis of the mosques' patronage (5.2.1), site placement (5.2.2), site design (5.2.3) and functional spaces (5.2.5), the mosques can be categorised according to their dominant functions. In general, the mosques in Island Southeast Asia fall into three types based on the primary functions served; sultanate, community and tomb mosques (Table 5-16).

5.3.2.1 Physical Identifiers of Sultanate Mosques

The study finds 11 mosques that are categorised as sultanate mosques; they are the 15th–16th century Masjid Agung Demak, Masjid Agung Banten, Masjid Agung Cirebon Kasepuhan; 17th–18th century Masjid At-Taqwa, Masjid Palopo and Masjid Sultan Ternate; and 19th–20th century Masjid Agung Surakarta, Masjid Azizi, Masjid Pulau Penyengat, Masjid Sultan Abu Bakar and Masjid Zahir. These mosques were built purposely to accommodate state functions involving ceremonial activities, in addition to being used for important religious occasions such as the weekly Friday prayers and the two annual *'Id* celebrations: *'Id al-Adha* and *'Id al-Fithr*.

Sultanate mosques on Java Island are found to have followed the ancient pattern of pre-Islamic urban layout of mandala. *Mandala*, a Sanskrit term used in Indian manuals of government (Kulke, 1986; pp. 2–4), takes it physical embodiment in the royal complex layout in order to determine spatial hierarchy. It refers to the chess-like arrangement of pre-Islamic royal city layout that could be traced in ancient Majapahit ruling centres and is found mainly in pre-17th century Javanese sultanate mosques (*Masjid Agung*). The most distinguishable identifier of the presence of a *mandala* is the *alun-alun*, a big open field without any trees on it. Based on Javanese cosmography, the north is profane while the south is sacred. The *alun-alun* is the determinant that defines the boundaries of the two zones. The western part of the *alun-alun*, where the mosque is always placed, is considered a sacred and holy site.

All of the sultanate mosques in Java are found arranged in the *mandala* layout. Masjid Agung Demak (15c), Masjid Agung Banten (16c), Masjid Agung Cirebon Kasepuhan (16c) and Masjid Agung Surakarta (19c) are all located to the west of the *alun-alun*. Outside of Java Island, Masjid At-Taqwa (17c) follows the same pattern. Other sultanate mosques do not seem to have been placed following any distinguishable patterns.

Almost all of the sultanate mosques were built near the sultanate palace. In Masjid Agung Demak and Masjid Agung Banten, although the palaces are no longer extant, they exist in toponym and ruins. In Demak, the remnants of the sultanate city only survived in the form of the mosque, the public square (*alun-alun*) and the names of the surrounding villages. *Kampung Sitinggil* or *Siti Hinggil* (*sitinggil* means high lands or places) is located to the south of the *alun-alun*, which traditionally would have been

the site of the sultan's palace; *Kauman* was traditionally the village where religious teachers (*ulema*) resided; and *Kampung Betengan* (*beteng* means fort) was probably a walled city or village (Ashadi, 2006) (Figure 4-56).

In Banten, excavations carried out in the late 1970s mainly discovered the old town layout of the Banten Sultanate, which consists of the palace Kraton Surosowan, the water channel and filtering systems (*Pengindelan Putih* and *Penjaringan Emas*), the sultans' leisure park in *Tasikardi* (about two kilometres to the southeast of the palace) and nearby ethnic community settlements (Figure 4-64).

The 19th–20th century sultanate mosques of the Malay Peninsula serve as state mosques. Both Masjid Zahir and Masjid Sultan Abu Bakar form part of the Islamic administration complex of the states of Kedah and Johor, consisting of Islamic Syari'ah Courts (*Mahkamah Syari'ah*) and Religious Affairs Department.

The presence of a royal tomb or mausoleum cannot be treated as a distinctive criterion of a sultanate mosque. As the survey reveals, 28 out of 41 mosques have cemetery or tombs incorporated as part of their landscape, thereby suggesting that cemeteries may be considered a consistent pattern in Island Southeast Asian mosques (see Table 5-16). In 6 out of 11 sultanate mosques, the patrons of the mosques were buried in specially designated structures of the mosques in the form of *cungkup*. Mosques such as Masjid Agung Demak, Masjid Agung Banten, Masjid Agung Cirebon, Masjid At-Taqwa, Masjid Sultan Ternate and Masjid Azizi incorporated part of the mosques' landscapes to house royal mausoleum.

In Surakarta however, the patrons were buried in Imogiri. The sultans of Riau, Kedah and Johor similarly have royal mausoleums placed in different sites to their respective mosques. In Masjid Palopo, the village people believe that the body of Puang Ambe Monte, the builder entrusted by Sultan Abdullah with building the mosque, is buried underneath the *mihrab*. Other than the fact that the sultanate mosques are recognised due to their patrons, no other physical identifiers exist to suggest the presence of a particular pattern in the mosque type.

5.3.2.2 Physical Identifiers of Community Mosques

Community mosques were usually built by prominent private members of the community, either as individuals or by forming a committee of leaders respected by the community members. These mosques are found in the 15th–16th century Masjid Merah Panjunan and Masjid Bayan Beleq; 17th–18th century Masjid Kebon Jeruk, Masjid An-Nawier, Masjid Al-Mansur, Masjid Kampung Baru, Masjid Teluk Manok, Masjid Tengkera, Masjid Kampung Hulu, Masjid Kampung Laut and Masjid Kampung Keling; and 19th–20th century mosques of Masjid Langgar Tinggi, Masjid Al-Makur Cikini, Masjid Pusaka, Masjid Pondok Tinggi, Masjid Patinburak, Masjid Lebuh Acheh, Masjid India Perak, Masjid Paloh, Masjid Kapitan Keling, Masjid Batak Rabit, Surau Tok Janggut and Masjid Panglima Kinta.

The conception of a community mosque is often prompted by the need of the community members to organise their collective religious activities. The capability to build a mosque is a source of pride and prestige for the community. Often, community members will raise funds to achieve such an objective, and to seek contributions from the *sultan* or local government in order to realise this objective (Gullick, 1987, p. 278). Accordingly, the location of the community mosque within a hamlet made up of several houses is the immediate physical identifier of the community mosque type. It will naturally be sited within a location that is easily accessible to all members of the community that it serves.

A community mosque is identified based on several characteristics. It is often recognised through its name, scale and location. The mosque often takes the name of the community or the hamlet it serves. The prefix *'kampung'* (village), for example, indicates the name of the village where the mosque is placed. Examples in this study are Masjid Kampung Baru, Masjid Kampung Hulu, Masjid Kampung Laut and Masjid Kampung Keling. At times, the mosque represents its community, such as Masjid India Perak, which is a mosque built for the Tamil Indian Muslim community; or mosques with Arabic names such as Masjid An-Nawier and Masjid Al-Mansur, indicating that they serve communities made up of Arabic descendants. Other community mosques are named after their hamlets. Only in recent times have the names of the mosques been changed to the names of the people who built them. For example, Masjid Panglima Kinta, which was originally called Masjid Tengah Perak (Mid-town, Perak).

These mosques are also found located either close to the main roads or close to the river or sea, which traditionally served as the main transportation channels. Being placed near a water source such as the river similarly have liturgical advantages for the mosque's communities, as it provided them with clean water for ablution purposes. With the exception of Masjid Merah Panjunan, Masjid Bayan Beleq and Masjid Pondok Tinggi, all of the community mosques are placed near the river or the sea (See Chapter 5.2.2).

The survey reveals, however, that several of the community mosques are currently located within a distance ranging between medium and far from the people's settlements. Despite the fact that community mosques were built to serve immediate community members, the current locations of the mosques suggest that they are not functioning effectively as community mosques. These mosques are Masjid Kebon Jeruk, Masjid Tengkera, Masjid Kampung Hulu, Masjid Kampung Laut, Masjid Kampung Keling, Masjid Lebuh Acheh, Masjid India Perak, Masjid Paloh, Masjid Kapitan Keling and Masjid Panglima Kinta.

Several factors may have caused the displacement of these mosques. Changes in urban layout and mode of transportation, and factors affecting the change in demography contribute to the present conditions of the community mosques. In pre-modern Malaysia, for example, the Malays used to be a riverine society. They built their settlements along the river, as the river was the only convenient means of communication. Many of the Malay villages were found to be established not simply along the river banks, but also fairly near to the sea. However, as soon as roads were built in the 1880s, the British administration noticed that the Malays began to build houses alongside the new roads, in places that were initially uninhabited (Gullick, 1958, p. 27). Community mosques that were once built close to the riverways to facilitate the mosque-goers consequently lost their significance and congregations due to changes in demography.

The formation of new towns similarly has adverse effects on established settlements. With the discovery of tin mines and the opening of forests to make way for rubber plantation and cultivation, new roads were built to serve these centers. In 19th century pre-modern Indonesia, transmigration took place in large number, changing the population pattern. In the Malay Peninsula, the Malays were reported to have left their traditional kampungs, and began living in the fringe of newly created towns to take

advantage of the new economy. The traditional community that was set up based on kinship and shared lifestyle (and belief) slowly diminished, making way for developments introduced by new infrastructure and a changed urban layout.

Traditionally, the Malay village (made of 40 houses or more) was considered a hamlet proper, as it was considered large enough to have its own headman (*penghulu*) and a Friday congregational mosque (Gullick, 1958, p. 28; 1992, p. 195). With the migration of people from villages to towns, or the opposite moving of townspeople to inner suburbs in order to have more spacious living, many of the old mosques were left without their original *qariah* (hamlet). Syed Ahmad Iskandar Ariffin (2004), in his study on Masjid Lebuh Acheh Penang, brought to light the issue of a mosque that has lost its *qariah*. The survival of Masjid Lebuh Acheh became an issue when it lost its original community. The field trip to this mosque reveals the encroachment of terraced shop lots onto its boundaries, while the remnants of the original settlement are left in the name of the streets and a few dilapidated wooden buildings to the south of its compound.

While *Jabatan Muzium dan Antikuiti* (Department of Museum and Antiquity) and Penang Heritage Trust were concerned not to embark on any developments that would alter the historic characteristics of the mosque's landscape, the *Majlis Agama Islam Pulau Pinang* (Penang Islamic Religious Affairs), on the other hand, was interested in 'recreating' the hamlet the mosque once lost (Syed Ahmad Iskandar, 2004). It is obvious from the visit taken to the site (four years after Syed Iskandar highlighted the issue) that the latter may have won the argument. Low rise terrace flats were built within the waqaf land of the mosque, with their main entrances facing the mosque (see Figure 4-201). However, the outcome only emphasizes another aspect of the conception of a mosque: that a mosque is founded based on the needs of the community, and not vice versa.

In a Malaysian television programme broadcasted on 15th March 2012, the conditions of Masjid Tengkera (which was once the principal mosque of Melaka) and Masjid Kampung Hulu were highlighted. Due to the insufficiency of members to make up the congregational Friday prayers, the mosques took alternate turns in organising the Friday event (i.e., once a forthight alternately) in order to ensure that the number of congregation satisfied the Friday prayer minimum requirement (*Musafir*, Channel Oasis, Malaysia).

In contrast, Masjid Kebon Jeruk and Masjid An-Nawier in Jakarta have been extended up to the boundary lines. With the growth of the immediate population for what were originally small hamlet mosques, the mosques had to maximise the floor space area to cater to a larger congregation. However, the outcome compromised the function of the mosque as a centre for socio-religious activities, as there is not enough open space provided for social functions. Consequently, people may prefer to go to newer mosques that are more comfortable,leaving the old mosques deserted and only used by passers-by and city workers for afternoon naps, as evident in Masjid Kampung Baru and Masjid Langgar Tinggi.

5.3.2.3 Physical Identifiers of Tomb Mosques

There are seven mosques that have been classified as tomb mosques from the study samples taken for analysis. They are 15th–16th century Masjid Sunan Ampel, Masjid Sendang Duwur, Masjid Sunan Giri, Masjid Mantingan and Masjid Sunan Kudus; and 19th–20th century Masjid Ubudiah and Masjid Langgar. These mosques are considered to be 'pure' tomb mosques based on the study's evaluation of their principal functions in accommodating tomb visitors, based on physical characteristics.

Classifying a mosque as a tomb mosque requires careful assessment, as most mosques in Island Southeast Asia incorporate cemeteries as part of their landscape elements (Table 5-17). In addition, it is common for a mosque to have overlapping functions besides accommodating daily congregational prayers, including providing ample space for people who have come to visit the tombs or ordinary graves. Masjid Agung Demak, for example, is not classified as a 'pure' tomb mosque despite being one of the most important destinations in the *ziyarah* activities formed by the Javanese Muslims. The mosque mainly houses the tombs of the earliest sultans of Demak, while the more celebrated *walis* were not buried there. Ony the tomb of Maulana Maghribi, one of the earliest Islamic missionary in the region, is found near the *mihrab* wall. The mosque, in essence, is a sultanate mosque that, over time, has become the object of pilgrimage due to people's reverence towards it.

Similarly, Masjid Agung Banten is believed to have served as an important tomb mosque, based on the physical layout of the burial place of the royal family. Tavernier, the French traveller, reported his surprise at the existence of so many sacred tombs

when he visited Banten in the 17th century (Chambert-Loir, Guillot, & Couteau, 2007, p. 335). During the field trip to the mosque, however, it seemed that the mosque had largely ceased to be a significant *ziyarah* focus. Even the *pawestren* room was converted to become a store room, and the women's prayer area was located at the back, to the left of the *mihrab*, defined by a movable screen.

	REF	REGION	MOSQUES	PATRONAGE				
				SULTAN	PRIVATE	FORM	*PRINCIPAL FUNCTION*	CEMETERY
15TH–16TH CENTURY	1	East Java	Sunan Ampel		1	Vern-T	TOMB	/
	2	East Java	Sendang Duwur		1	Vern-T	TOMB	/
	3	East Java	Sunan Giri		1	Vern-T	TOMB	/
	4	Central Java	Mantingan	1		Vern-T	TOMB	/
	5	Central Java	Kudus		1	Vern-T	TOMB	/
	6	Central Java	Demak	1		Vern-T	SULTANATE	/
	7	West Java	Agung Banten	1		Vern-T	SULTANATE	/
	8	West Java	Cirebon Kasepuhan	1		Vern-T	SULTANATE	/
	9	West Java	Panjunan		1	Vern-T	COMMUNITY	X
	10	Nusa Tenggara	Bayan Beleq		1	Vern-T	COMMUNITY	/
	10	**TOTAL**		**4**	**6**			
17TH–18TH CENTURY	1	Jakarta	Kebon Jeruk		1	Col-H	COMMUNITY	/
	2	Jakarta	An-Nawier		1	Col-H	COMMUNITY	/
	3	Jakarta	Al-Mansur		1	Vern-T	COMMUNITY	/
	4	Jakarta	Kg Baru		1	Vern-T	COMMUNITY	X
	5	Nusa Tenggara	At-Taqwa	1		Vern-LR	SULTANATE	/
	6	Sulawesi	Palopo		1	Vern-T	SULTANATE	X
	7	Patani	Teluk Manok		1	Vern-LR	COMMUNITY	X
	8	Malay Peninsula	Tengkera		1	Vern-T	COMMUNITY	/
	9	Malay Peninsula	Kg Hulu		1	Vern-T	COMMUNITY	/
	10	Malay Peninsula	Kg Laut		1	Vern-T	COMMUNITY	/X
	11	Malay Peninsula	Kg Keling		1	Vern-T	COMMUNITY	/
	12	North Maluku	Sultan Ternate	1		Vern-T	SULTANATE	/
	12	**TOTAL**		**2**	**10**			
19TH–20TH CENTURY	1	Jakarta	Langgar Tinggi		1	Col-H	COMMUNITY	X
	2	Jakarta	Al-Makmur Cikini		1	Vern-T	COMMUNITY	X
	3	Surakarta	Agung Surakarta	1		Vern-T	SULTANATE	/
	4	Kalimantan	Pusaka		1	Vern-T	COMMUNITY	/
	5	Sumatera	Azizi	1		Col-H	SULTANATE	/
	6	Sumatera	Pondok Tinggi		1	Vern-T	COMMUNITY	X
	7	Riau	Pulau Penyengat	1		FOR-H	SULTANATE	/
	8	Irian Jaya	Patinburak		1	FOR-H	COMMUNITY	X
	9	Malay Peninsula	Lebuh Acheh		1	Col-H	COMMUNITY	/
	10	Malay Peninsula	Sultan Abu Bakar	1		Col-H	SULTANATE	X
	11	Malay Peninsula	India Perak		1	FOR-H	COMMUNITY	X
	12	Malay Peninsula	Zahir	1		Col-H	SULTANATE	X
	13	Malay Peninsula	Ubudiah	1		Col-H	TOMB	/
	14	Malay Peninsula	Paloh		1	Vern-T	COMMUNITY	/
	15	Malay Peninsula	Kapitan Keling		1	Col-H	COMMUNITY	/
	16	Malay Peninsula	Batak Rabit		1	Vern-T	COMMUNITY	/
	17	Malay Peninsula	Surau Tok Janggut		1	Vern-LR	COMMUNITY	X
	18	Malay Peninsula	Panglima Kinta		1	Col-H	COMMUNITY	/
	19	Malay Peninsula	Langgar Kelantan	1		Vern-LR	TOMB	/
	19	**TOTAL**		**7**	**12**			

LEGENDS

VERN-T	Vernacular Tajug typology
VERN-LR	Vernacular long-roof house typology
COL-H	Colonial-hybrid
FOR-H	Foreign-hybrid

Table 5-17 Mosque types and distribution of mosques with cemeteries.

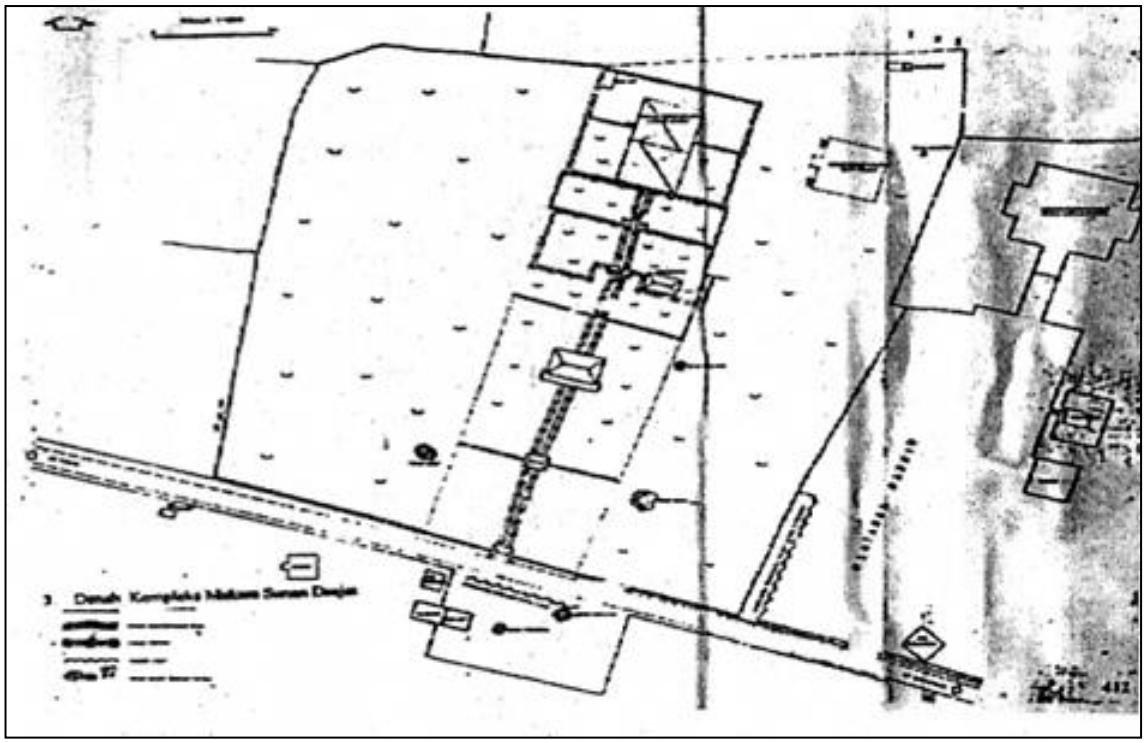
Masjid Sunan Kudus, despite being prominent as a tomb mosque, is also an active learning centre for the community it serves. Masjid Ubudiah can also be categorised as a *masjid istana* (palace mosque) (Syed Ahmad Iskandar, 2004), as it is built mainly to serve the royal dignitaries, both in the royal-religious activities and in the commemoration of their deceased. Accordingly, this study identifies a tomb mosque based on the dominance of its functions in relation to associated tomb visit activities, as evident from physical characteristics of the mosque's location, site planning and interior layout. For the purpose of comparison, mosques with overlapping functions such as the Masjid Agung Demak and Masjid Agung Banten are also included in the discussion.

One of the physical identifiers for a tomb mosque is its placement on a small hill or an elevated site. The site selected is often isolated, as isolation heightens the sacrosanct aspect of the mosque (Abdul Rochym, 1983, p. 86). A review on the tomb layout for Sunan Drajat (Figure 5-32) and Sunan Tembayat (Figure 5-33), both which are objects of annual pilgrimage in Java, reveals this distinctive criterion. Mosques such as Sendang Duwur (Figure 5-34), Sunan Giri (Figure 5-35), Mantingan (Figure 5-36) and Ubudiah are similarly found built on small hill tops overlooking surrounding areas. It is also common to find that the site selected was a historically sacred site. *Babad Giri*, for example, contains passages narrating the selection of site for the Masjid Sunan Giri:

> '…disuruh mencari tempat di barat daya Tandhes (Gresik) di (bukit) Giri Perwata, tanah di sana sangat suci'
>
> '…kemudian Kanjeng Sunan (Giri) melanjutkan membuka (hutan) di bukit Kedaton, diikuti dengan membuka masjidnya di (halaman) berundak tujuh'
>
> '…(he was) ordered to look for a place southwest of Tandhes (Gresik) at the hill of Giri Perwata; as that land is very pure (sacred)'
>
> '…then Sunan Giri continued opening the forest at Kedaton Hill, followed by founding its mosque on a site which has seven levels' (cited in Moehammad Habib, 2001, p. 112)

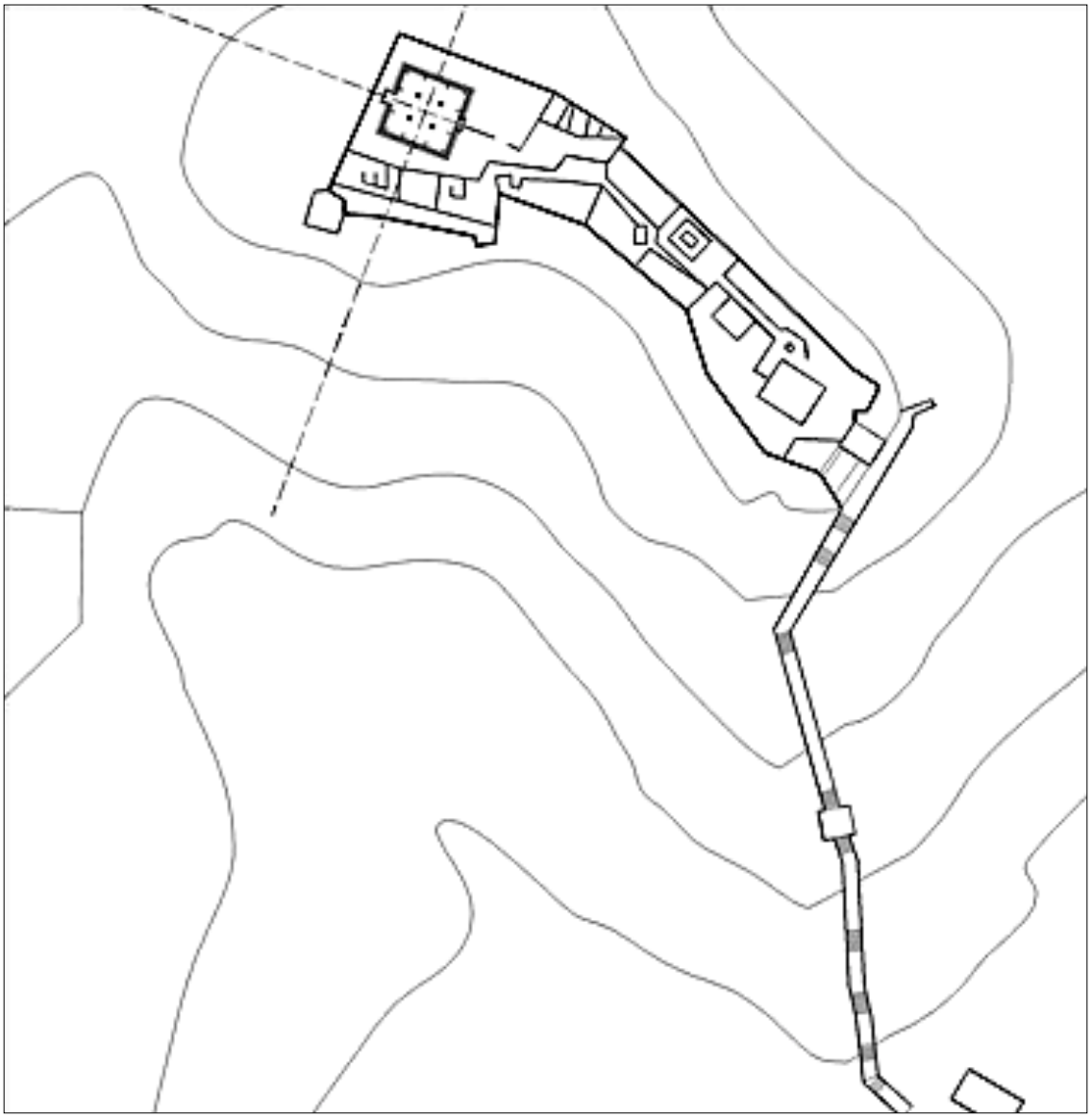
These descriptions match the physical layout of the Sunan Giri's necropolis, although the old mosques mentioned in the *Babad* are no longer there. The custom of selecting a *pure* site to build a mosque has been practiced even from pre-Islamic times when a sacred building was built on a hill sculptured into seven levels. A site, according to Moehamad Habib, is also considered pure if a sacred edifice was previously built there. In a research conducted on Masjid Ampel Denta, Masjid Sendang Duwur and

Masjid Mantingan, pre-Islamic artefacts were found on the sites of these mosques containing relief ornamentations depicting sacred figures or sacred buildings of Hindu-Javanese times (Moehamad Habib, 2001, p. 113).



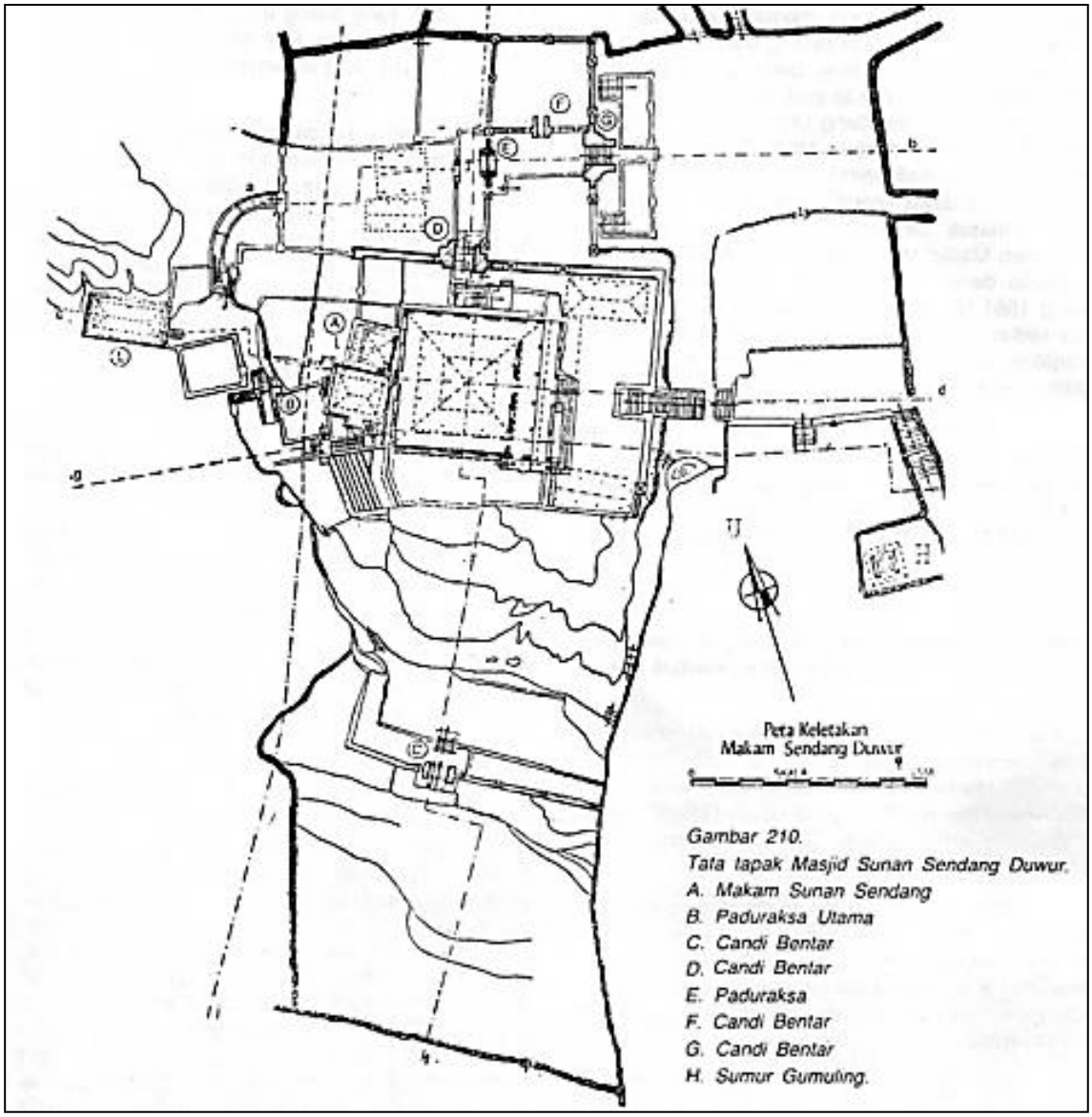
SOURCE: (MOEHAMAD HABIB, 2001)

Figure 5-32 Tomb of Sunan Drajat.



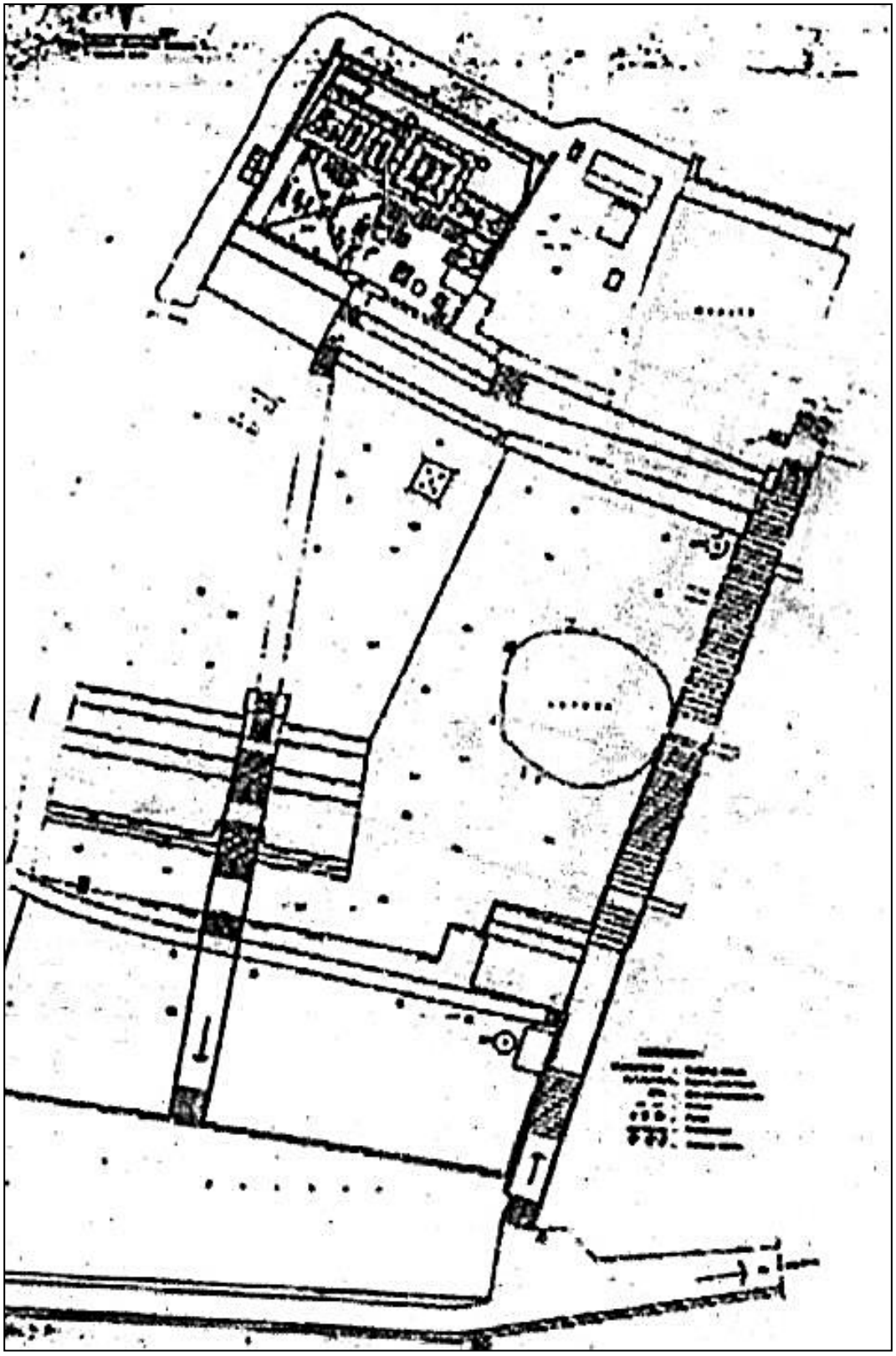
SOURCE: (HTTP://YULIANTOQIN.CULTURE360.ORG/)

Figure 5-33 Layout of tomb complex of Sunan Tembayat.



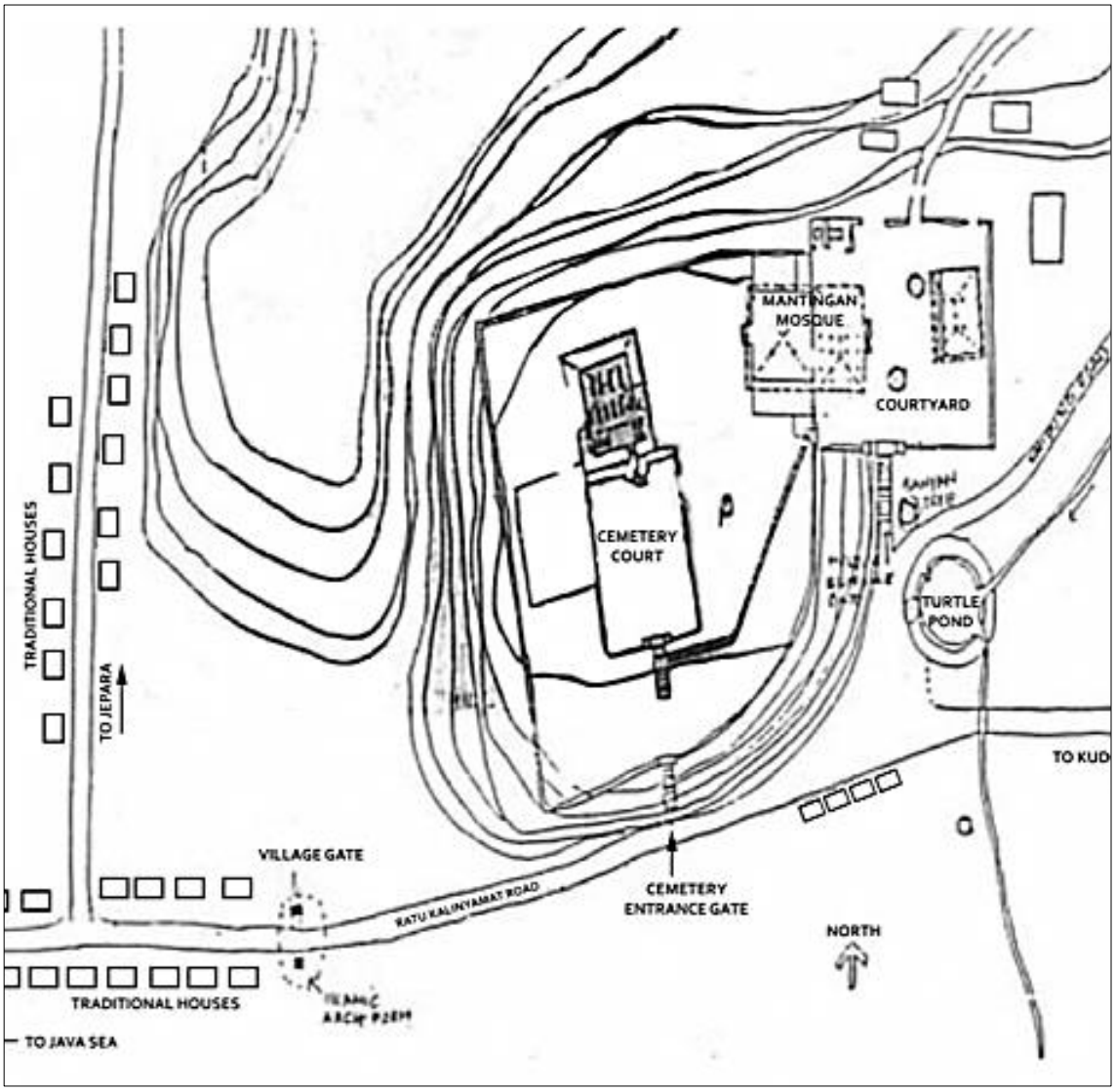
SOURCE: (TJANDRASASMITA, 1984)

Figure 5-34 Layout of tomb mosques: Sunan Sendang Duwur.



SOURCE: (MOEHAMAD HABIB, 2001)

Figure 5-35 Layout of tomb mosques: Sunan Giri.



SOURCE: (HANDINOTO & HARTONO, 2007)

Figure 5-36 Layout of tomb mosques: Masjid Mantingan – Sultan Hadlirin and Ratu Kalinyamat.

Masjid Mantingan in Jepara, East Java, is also said to be built on a hill *berundak tujuh* (containing seven levels). In addition, the site was considered in ancient Javanese tradition to be one of the eight most important abodes for the spirits *'lelembut'*. Pamantingan, the ancient name of Mantingan, was also known as the home of the lady ascetic Nyai Loro Kidul, the Southern Seas Goddess. It was also the reclusion site for Jumadil Kubro, the father of Sunan Giri, as it was the learning centre that Sunan Kalijaga frequented (Graaf & Pigeaud, 1985, p. 120).

The second physical identifier is the design layout of the mosque complex, especially in terms of placement of the tombs in relationship to the mosque. In most of the tomb mosques surveyed, the necropolis of the revered individual is placed in the

region approximately to the west of the main prayer hall (i.e., in the direction of the *qibla* behind the *qibla* wall). The tombs found in Sendang Duwur, Sunan Ampel, Sunan Giri, Mantingan, Kudus, Demak, Ubudiah and Langgar Kelantan are all located in the western part of the mosques' compounds. With the exception of the tomb of Sunan Ampel, all of the other tombs are placed within a *cungkup*, or a roofed structure often with a space around the tombs provided for tomb visitors to perform prayers and invocations.

The presence of *pawestren* (ladies' prayer area) in Javanese mosques is also a sign that a mosque functions as a tomb mosque. The main function of a *pawestren* is to provide a space for a female congregation who (were usually 'rewarded' to) sit and read passages from the *Qur'ān* and selected *dhikr* during selected times of the year as a tribute and invocation towards the spirit of the deceased. This space is distinguished from the normal prayer space designated for women congregations by its placement and design in relation to the main prayer hall and the tombs.

Ordinary female prayer spaces are often located near the eastern wall of the mosque (i.e., behind the *saf* of the male congregation) if the prayer space is relatively tight. In bigger mosques, the female prayer space is located to the left of the main prayer hall (i.e. near the southern wall or on the upper level). This space is usually not completely sealed and could be demarcated by movable screens such as half-height movable dividers, or by drawing a curtain. It is also often accessible from the common entrance of the main prayer hall. The *pawestren*, however, is usually designed completely sealed off from the main prayer hall. It is also located adjacent to the tomb building. Such spaces are found in Sunan Giri, Mantingan and Banten.

Apart from the complete seclusion or separation from the main prayer hall, the *pawestren* is also located within covered structures, sometimes within the same space as the tombs, such as is the case in Masjid Agung Demak. In the case of Masjid Agung Banten, as the post-18th century tombs were placed underneath the main roof of the mosque by a walled encroachment of the original prayer hall, the *pawestren* was also built adjacent to it, thereby significantly reducing the prayer space. The modification to the floor layout is identified through study of the floor plan of the mosque. The Masjid Agung Banten originally employed a 36-pillar structural configuration that provided it with ample prayer space. In the original scheme, the tombs of the sultan were placed underneath the *cungkup* to the north of the prayer hall. However, the tombs of the post-

18th century rulers were somehow located inside the mosque in the western part of the prayer hall, which is currently sealed off from the main prayer hall with full height walls. The *pawestren* is built adjacent to the tomb, placed near the *qibla* wall. Such arrangements have resulted in the asymmetrical positioning of the *mihrab* and reduction of the visible columns from 36 to 24 (See *Catalogue of Mosques*, Chapter 4.2.7).

In all of the mosques surveyed, the tombs are located within a fenced off compound adjacent to the mosque with separate entrances. In Javanese mosques, the tomb of the most revered *wali* or rulers are placed in *dalem* (i.e., the most inner part of a tomb complex that is usually the third and last place in terms of sequence of placement). The necropolis of Masjid Sendang Duwur, Sunan Giri, Mantingan and Kudus are all designed with gated walls that provided sequential hierarchy in terms of the tombs' sanctity. The entries to the tombs compounds are also marked with gateways, either in the form of *Candi Bentar* (Figure 5-37) or *Kori Agung* (Figure 5-38).

The successive compound layout is not evident in the tomb mosques of Ubudiah and Langgar. However, the tombs of the most important figures are found to be placed underneath the roof, and close to the *mihrab*. With Masjid Langgar, its main prayer hall can be sectioned off (i.e., closed off) from the rest of the space, as it was traditionally used by the royal dignitaries. This explains the difference in levels between the main hall and the surrounding *serambi*, which not only caters for additional congregation, but further emphasizes the hierarchy in social status.

Figure 5-37 *Candi Bentar* (split gates) of Masjid Sunan Kudus.

Figure 5-38 *Paduraksa* or *Kori Agung* (closed gates) of Masjid Sendang Duwur.

5.3.3 Dominant Architectural Model and its Distribution

	REF	REGION	MOSQUES	TYPOLOGY BY FORM			
				VERN-T	VERN-LR	COL-H	FOR-H
15TH–16TH CENTURY	1	East Java	Sunan Ampel	*			
	2	East Java	Sendang Duwur	*			
	3	East Java	Sunan Giri	*			
	4	Central Java	Mantingan	*			
	5	Central Java	Kudus	*			
	6	Central Java	Demak	*			
	7	West Java	Agung Banten	*			
	8	West Java	Cirebon Kasepuhan	*			
	9	West Java	Panjunan	*			
	10	Nusa Tenggara	Bayan Beleq	*			
	10						
17TH–18TH CENTURY	1	Batavia/Jakarta	Kebon Jeruk			*	
	2	Batavia/Jakarta	An-Nawier			*	
	3	Batavia/Jakarta	Al-Mansur	*			
	4	Batavia/Jakarta	Kg Baru	*			
	5	Nusa Tenggara	At-Taqwa	*			
	6	Sulawesi	Palopo	*			
	7	Patani	Teluk Manok		*		
	8	Malay Peninsula	Tengkera	*			
	9	Malay Peninsula	Kg Hulu	*			
	10	Malay Peninsula	Kg Laut	*			
	11	Malay Peninsula	Kg Keling	*			
	12	North Maluku	Masjid Sultan Ternate	*			
	12						
19TH–20TH CENTURY	1	Batavia/Jakarta	Langgar Tinggi			*	
	2	Batavia/Jakarta	Al-Makmur Cikini	*			
	3	Surakarta	Agung Surakarta	*			
	4	Kalimantan	Pusaka	*			
	5	Sumatera	Azizi			*	
	6	Sumatera	Pondok Tinggi	*			
	7	Riau	Pulau Penyengat				*
	8	Irian Jaya	Patinburak				*
	9	Malay Peninsula	Lebuh Acheh			*	
	10	Malay Peninsula	Sultan Abu Bakar			*	
	11	Malay Peninsula	India Perak				*
	12	Malay Peninsula	Zahir			*	
	13	Malay Peninsula	Ubudiah			*	
	14	Malay Peninsula	Paloh	*			
	15	Malay Peninsula	Kapitan Keling			*	
	16	Malay Peninsula	Batak Rabit	*			
	17	Malay Peninsula	Surau Tok Janggut		*		
	18	Malay Peninsula	Panglima Kinta			*	
	19	Malay Peninsula	Langgar Kelantan		*		
	19			**25**	**3**	**10**	**3**

LEGENDS:

Vern-T: Vernacular *Tajug* prototype	Col-H: Colonial-hybrid influences
Vern-LR: Vernacular long-roof house prototype	FOR-H: Foreign-hybrid influences (other than colonial)

Table 5-18 Mosque typology by form.

5.3.3.1 Mosques Built in Vernacular Prototypes

A large percentage of the mosques analysed across the periods and regions are built in vernacular prototypes. The majority of them are of *tajug* or Javanese mosque prototype, while a very small percentage (3 out of 28) are built in long-roof house prototype. Despite the *tajug's* decreasing popularity in the 19th and 20th centuries, its prevalence across the regions warrants further scrutiny as to why this prototype became the preferred model.

The three mosques built in long-roof house typology are Masjid Teluk Manok, Patani (18c), Surau Tok Janggut, Kedah (20c) and Masjid Langgar Kelantan (20c). Despite belonging to the later periods, these mosques were still built in vernacular tradition. Incidentally, all of the mosques are found in the northern part of the Malay Peninsula. All three are built using wood, with rectangular floor plans and stilt construction. The discussions on salient features of the vernacular prototypes and why they have been adopted for the mosque design is presented in Chapter 6.

5.3.3.2 Mosques Built in Colonial and Foreign-Influenced Idioms

Mosques built in non-vernacular idioms only appeared from the 17th century onwards. They were evident mainly in administration centres under the control of the European powers. In the 18th century the Dutch were mainly responsible for many mosques built in Melaka, although these mosques, such as Masjid Kampung Hulu, Masjid Kampung Keling and Masjid Tengkera, were still being built in *tajug* prototype. In Batavia (Jakarta), however, Masjid Langgar Tinggi (19c) unmistakenly demonstrates the Dutch influence, especially seen in its high roof slope and two storey constructions. Other mosques such as Masjid Kebon Jeruk (18c) and Masjid An-Nawier (18c) were extensively renovated and enlarged, to the extent that the original vernacular buildings were completely concealed and transformed.

Towards the end of the 19th century and early 20th century, a considerable number of mosques were built in the *Raj Style* (Fee, 1998, p. 215; Scriver & Prakash, 2007, p. 32). The most outstanding features of these mosques are their roof lines. With bulbous domes, minarets, *chatri* and crenelated parapet, the architecture of the mosques

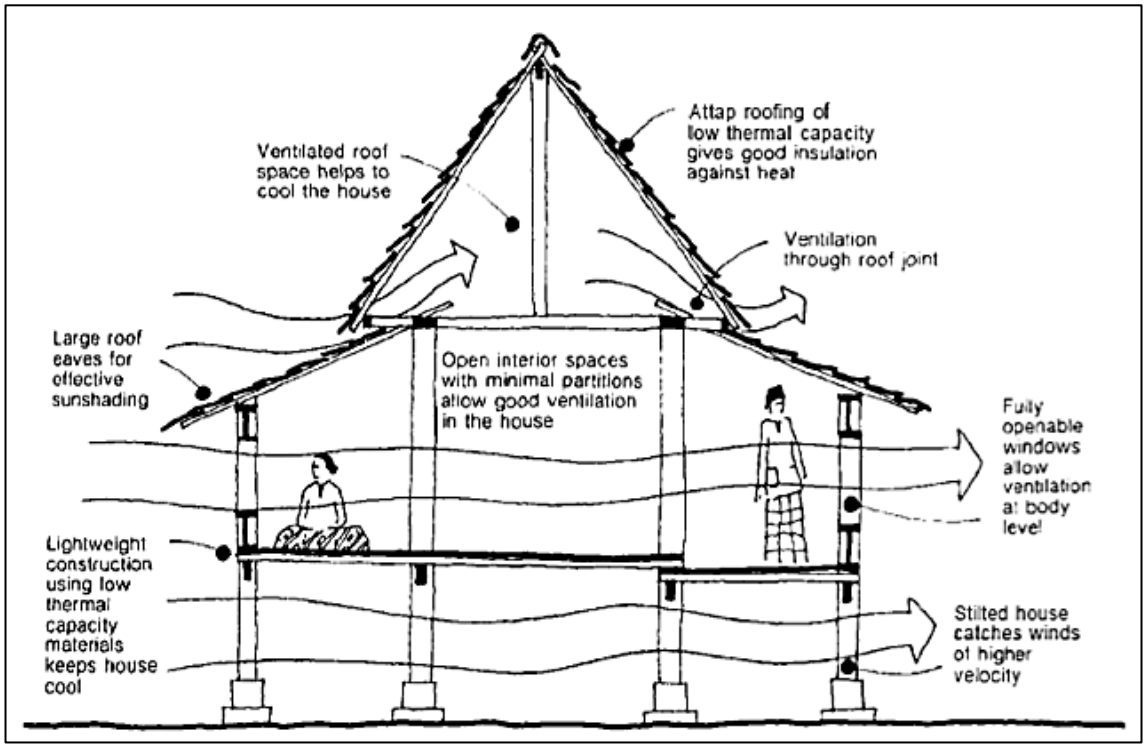
were the outcome of several years of British experimentation in British-India (Scriver & Prakash, 2007, pp. 15–35). It should not be surprising that these phenomena mainly occurred in the Malay Peninsula, after the implementation of British bureaucratic order in the last quarter of the 19th century.

It is also in the chronological period of the 19th and 20th centuries that other stylistic influences emerge, as seen in the mosques of Masjid Pulau Penyengat, Masjid Patinburak and Masjid India Perak. These mosques have been categorised as mosques displaying foreign with hybrid influence (*FOR-H*), as they may have taken references from foreign samples. The discussions on these mosques are presented in Chapter 6.

5.3.3.3 Morphology of the Mosque Idioms from 15th to 20th Century

By examining the mosques' site designs (Chapter 5.2.3), functional spaces (Chapter 5.2.5), formative aesthetics (Chapter 5.2.6), stylistic influences (Chapter 5.2.7) and material aesthetics (Chapter 5.2.8), the analysis found that the most popular model adopted for Island Southeast Asian mosques is the *tajug* prototype. It was clearly the preferred model in pre-19th century mosques. It persisted into the 20th century, although by this period other models had begun to be adopted in the region (see Table 5-18).

It is crucial to uncover why this prototype was prevalent, regardless of chronological or regional setting. Is it possible that its popularity was due to people's reverence towards the Masjid Agung Demak? Could there be other factors that contributed to the region's preference for such a model? Despite the rich vocabulary existing in the vernacular architecture of the region, why has the *tajug* model (*VERN-T*) prevailed against all other local models? The analysis also found that all the principle mosques (*Masjid Agung*) adopt the *tajug* construction, while mosques adopting other vernacular models (long-roof house prototype *VERN-LR*) such as Masjid Teluk Manok, Surau Tok Janggut and Masjid Langgar are community mosques respectively.



SOURCE: (PHILIPS GIBBS, 1987)

Figure 5-39 Climatic design of a Malay House.

Apart from the fact that the vernacular mosque was built to adapt to climatic conditions of the region (see Figure 5-40), this type declined drastically in the 19th century, giving way to mosques adopting colonial (*COL-H*) and foreign (*FOR-H*) architectural idioms (see Table 5-18). The most outstanding feature distinguishing the 19th and 20th century mosques is the roof. With their crenulated parapet, bulbous domes of varying sizes and minarets placed at the corners of the building, these mosques signified a break from traditional building practices.

What factors caused this paradigmatic change? The analysis reveals that almost all of the mosques of 19th and 20th century were built by affluential individuals that acted as patrons (see Chapter 5.2.1). While technological and material advancement are partly responsible for the change in building practices, the fact that some of these mosques, such as Masjid Sultan Abu Bakar, Masjid Zahir and Masjid Ubudiah, are representing visual culture not found in the local reservoir naturally raises several critical questions pertaining to Islamic representation.

Why have the vernacular models lost favour in the 19th and 20th centuries? Are the factors causing the waning of these models related to purely material and

technological factors? Are there any logistic problems in getting labour and craftsmen to work on similar models? Or has the building material (i.e. wood) become limited or unsuitable to build these mosques?

Or is the change in stylistic preference more affiliated with a change in the design thinking of the patrons? That the idiomatic change reflects the efforts of the patrons to 'enrich' the previously austere and humble looking mosques of Island Southeast Asia? Is there any paradigm shift in the concept of Islamic representation as seen in mosque architecture? Have the patrons found a better medium in authenticating Islam in the region through the definition of new architectural language for the mosque?

In order to find answers to these questions, the following chapters will look into the design aspects of each of the mosque prototypes (i.e., vernacular-*tajug*, vernacular long-roof, colonial-hybrid and foreign-hybrid influences). The objective is to study in detail how each type responds to liturgical requirements of a mosque, and how, in turn, they compare to the essential elements provided in the Prophet's Mosque prototype (see Chapter 3.2.5).

5.4 Conclusion

The typological analysis conducted on the mosques has enabled the present study to sub-categorize them based on form as well as function. Based on similarity in architectural style and structural configurations, the mosques generally fall into categories of vernacular mosques having *tajug* or *long-roof house* prototype; or non-vernacular mosques with *colonial* and *foreign hybrid* architecture. The analysis also indicated that, in spite of geographical locations and periodical change, the *tajug* prototype persisted well into the 20th century as the preferred mosque model. In order to uncover factors influencing the popularity of the *tajug* application, Chapter 6 will look into the mosque's architectural configuration and spatial planning, in order to seek design decision factors that contributed to the prevalence of the *tajug* model over other models.

The results of the analysis also suggested that the form (i.e., architectural and stylistic influence) of the mosque is not purely dictated by climatic, geographic or cultural factors. As evident from the data populated, their are many samples that demonstrate the impact of the patrons on the image-making of the mosque as a representation of Islam. From the 15th to the 20th century, we are confronted by mosques with peculiar architectural elements, or with peculiar designs, which emerged from the inclination and intention of respective patrons. These phenomena are better expressed in the 19th and 20th centuries, as their are many mosque samples that projected such images. However, a closer look at each of the periods of investigation will reveal the role of human agency in the making of the mosque architectural vocabulary. The discussions on this issue are presented in Chapter 7.

6 CHAPTER 6: MOSQUE ARCHITECTURE IN ISLAND SOUTHEAST ASIA

6.1 Introduction

The architectural styles of the Island Southeast Asian mosques are divided into two distinctive types: vernacular and non-vernacular. Vernacular mosque types are those that display distinctive architectural language identifiable to local building traditions, either in their employment of forms, building materials or techniques. From the survey carried out, it was found that vernacular mosques generally derived their forms from two prototypes: the *tajug* and the long-roof (*bumbung panjang*) house construction.

Non-vernacular mosques are those that are built representing foreign architectural grammar or a hybrid of styles not found in local building traditions. In general, these mosques appeared in the post-17th century period, due to the availability of new building materials and techniques that paved the way for new idioms in mosque architecture not previously seen in Island Southeast Asia. All of the mosque types will be discussed in detail in this section, with particular scrutiny given to the origin of forms and associated building techniques. The objective is to analyse the design-decision factors contributing to the employment of the mosque's physical attributes.

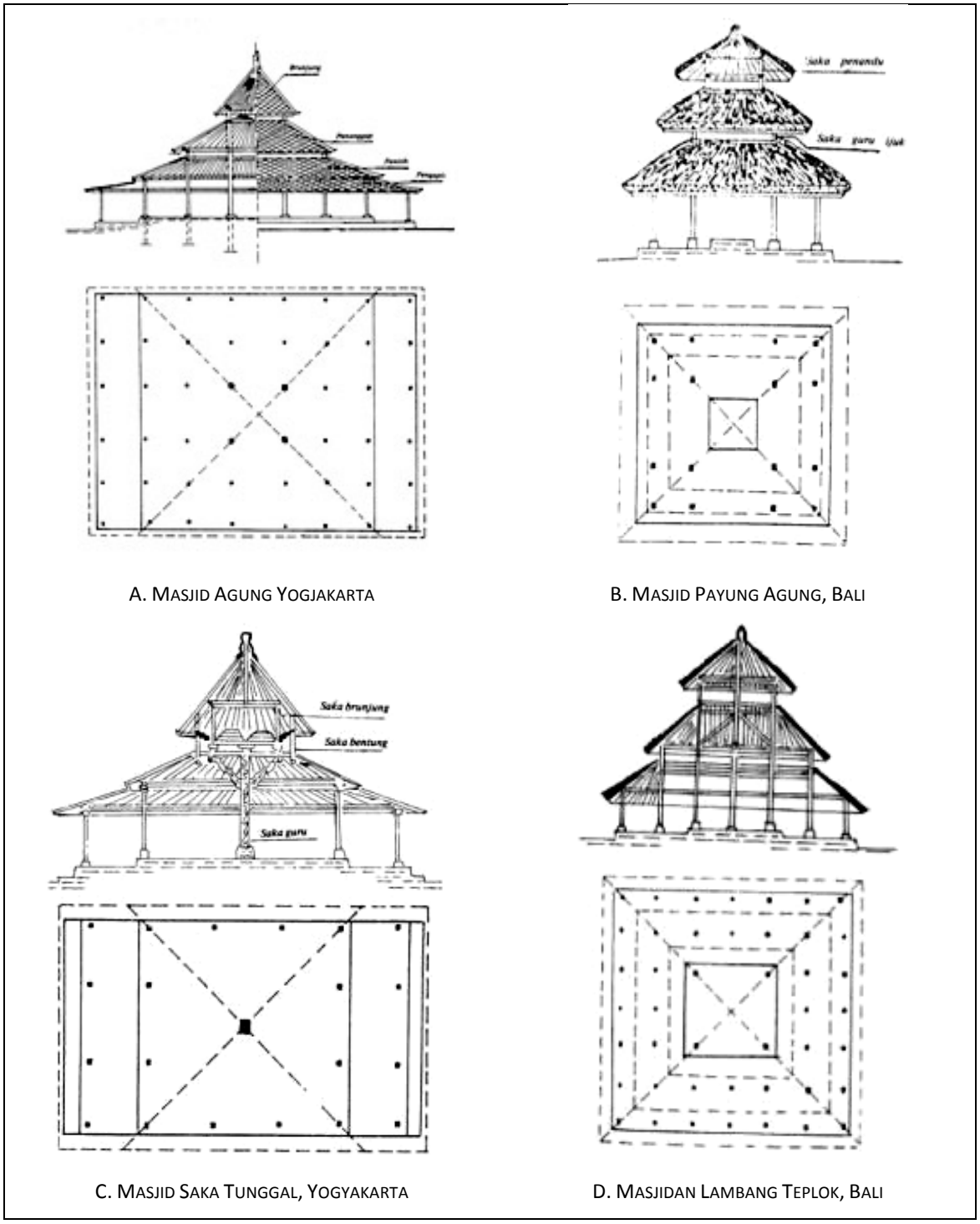
6.2 Design Features of *Tajug* Prototype

The architectural origin of the vernacular mosques are mainly found in the forms of tiered pyramidal roof structures (*tajug*), often associated with traditional Hindu-Javanese temples (Figure 5-3). This particular form dominates the architectural style of Island Southeast Asian mosques not only in Java, but also across the regions and time span studied. Thus, it is recognised as representing the typology of mosques in Southeast Asia (Frishman & Khan, 1994, pp. 12–3). Out of 28 mosques identified as vernacular mosques, 24 of them exhibited the pyramidal roof (*tajug)* prototype, while four of them are found to have adopted the long-roof (*bumbung panjang*) house prototype architectural designs.

Tiered pyramidal roof mosques in Island Southeast Asia are said to have originated from the oldest extant wooden mosque of Island Southeast Asia, Masjid Agung Demak (built at the end of the 15th century). As this model is also identifiable in pre-Islamic Javanese *wantilan* (cock-fighting arenas) and the multi-tiered pyramidal roof structure of Hindu-Balinese temples (Sartono, Marwati, & Nugroho, 1977, p. 210), the mosque's form has also been widely recognised as the 'Javanese mosque' prototype (Pijper 1974; Graaf 1963) (Figure 6-1).

Depending on the construction techniques and final forms intended, the Javanese pyramidal roof has at least 10 types of variations, including *limasan, sinom, joglo, kutuk ngambang, tajug, kampung, dara gepak, klabang nyander, srotong* and *panggang epe* (H.J. Wibowo, 1987). The main type used for mosques is usually *tajug,* with the *joglo* and *limasan* types found as variations or additional structures to the main buildings. For the purpose of identification, this study refers to the Javanese model as the *tajug* prototype, as this assists in tracking variations to the popular adopted forms of the mosque.

The *tajug* prototype is characterised by several salient features. It is a detached building constructed with ample open spaces surrounding the main building. Its compound is well defined through architectural treatments of the fence walls and the gateways. The pyramidal roof form has between two and seven tiers, depending on the size of the floor that it covers. The *serambi* (veranda) forms an elemental part of its design model.



A. MASJID AGUNG YOGJAKARTA B. MASJID PAYUNG AGUNG, BALI

C. MASJID SAKA TUNGGAL, YOGYAKARTA D. MASJIDAN LAMBANG TEPLOK, BALI

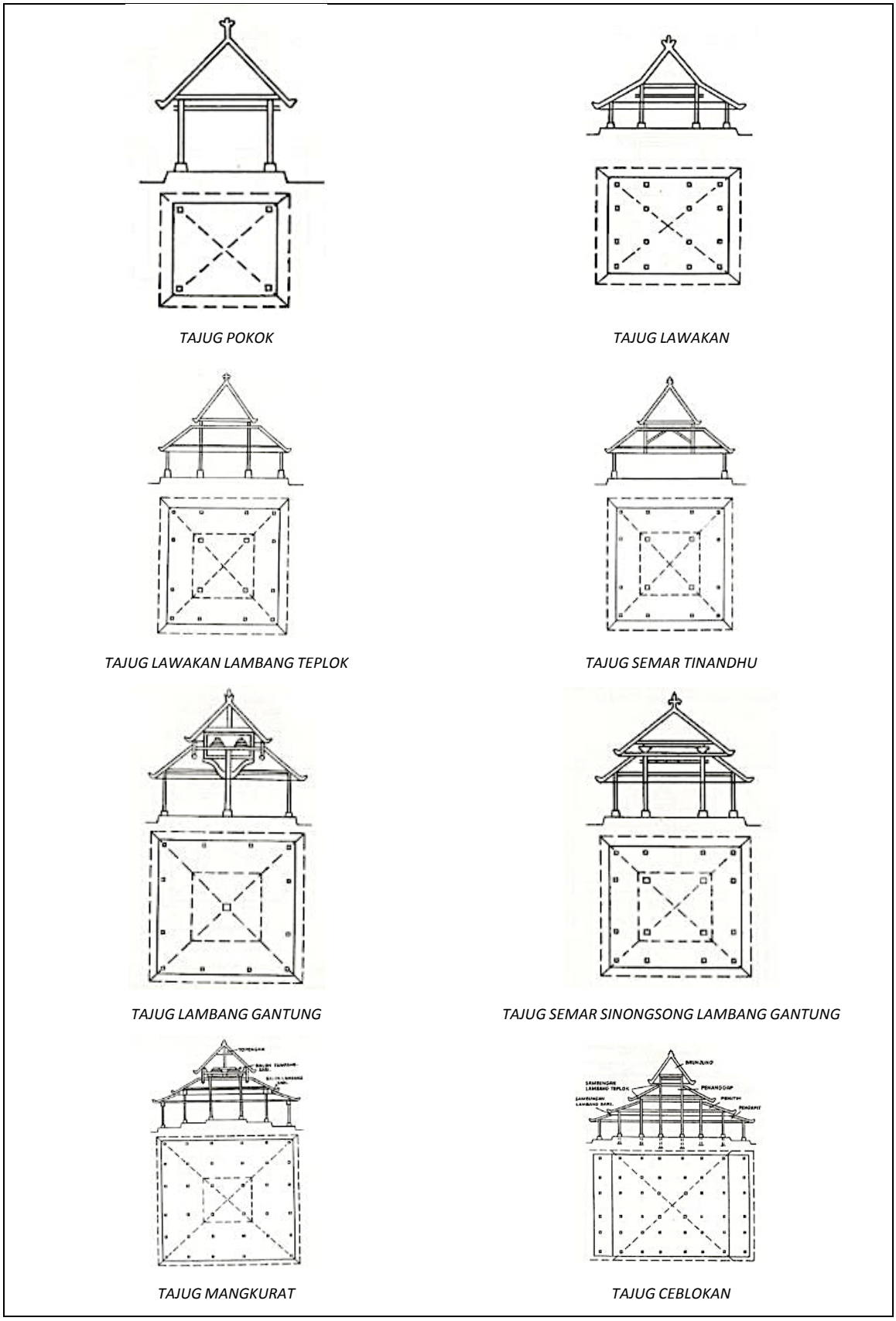
SOURCE: (ISMUNDAR, 1986)

Figure 6-1 Various roof forms derived from Java-Hindu temple design.

The *tajug*'s foundation is of slab on ground construction. However, outside of Java Island, variations to the basic model are found in mosques such as Masjid At-Taqwa Nusa Tenggara (17th century) and Masjid Kampung Laut in Malay Peninsula (18th century), which were both built on stilts. It has a distinctive structural layout marked by the presence of *soko guru* (principal pillars) and supporting pillars arranged

in an established pattern. The *soko guru* were usually made of massive solid pieces of wood of considerable diameter and height, as they made up the main frame of the building structure, which supported the multi-tiered roof configuration. This structural configuration required the availability of very large trees, which consequently determined, at the conception stage, the height and size of the intended mosque. In the absence of sufficient wood, such as in Masjid Agung Demak and Masjid Agung Cirebon Kasepuhan, smaller pieces of wood were held together with metal bands, forming the central pillars. This type of pillars are known as *soko tatal* (Ashadi, 2006, p. 35).

The four *soko guru* placed at the centre formed a square unit. Depending on the size of the floor plan and the height of the roof, supporting medial pillars may have been required, and they would have been arranged at equal distances surrounding the central square. A set of perimeter columns defined the boundary of the space, and in many mosques that have gone through extensive upgrading works, these columns were not evident, as the perimeter walls were replaced with cement-rendered brick walls that concealed the original structures. The structural configuration determines, and thereby restricts, the size of the mosque, with the simplest form having only four pillars. As the floor plan extended, the number of the pillars increased to 12, 16, 36 and 48 (Figure 6-2).



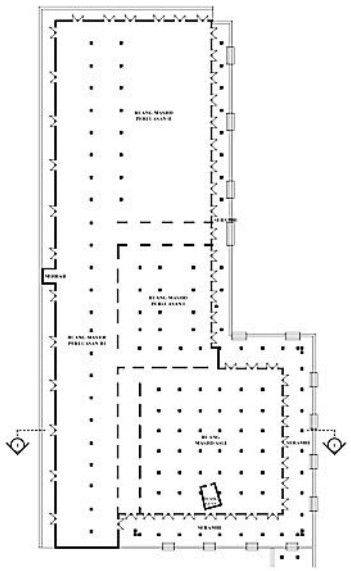
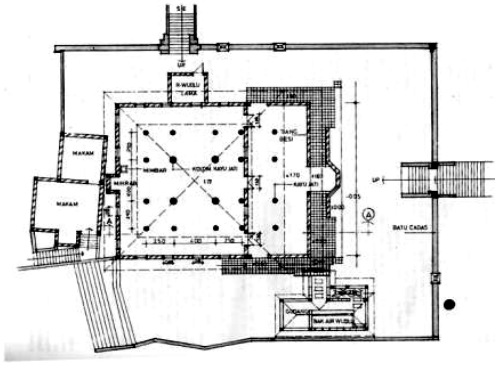
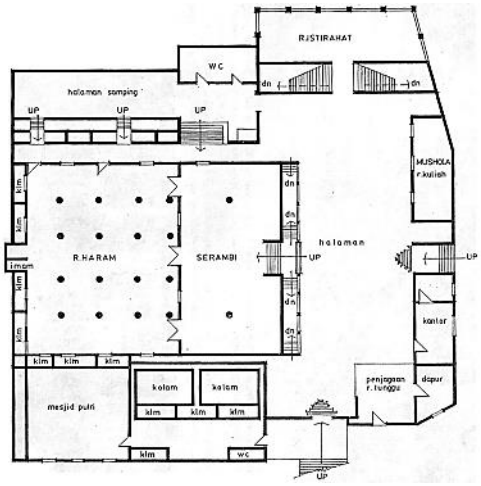
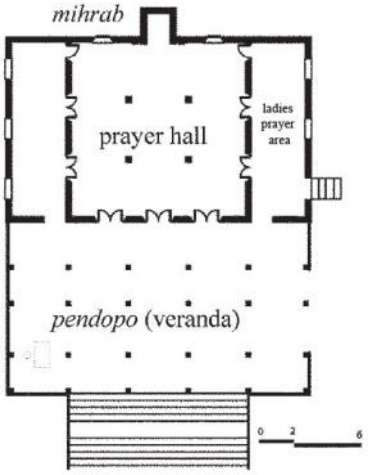
EDITED FROM (WIBOWO, 1987)

Figure 6-2 *Tajug* Configuration.

6.2.1 Floor Plan and Roof Types

Variations to the basic *tajug* model are achieved when the central core forms a rectangular plan rather than a square, or when the central four pillars are replaced by one main pillar (*soko tunggal*). Bambang (2000) found that, based on 127 Javanese mosques selected for analysis, 81 mosques had a square plan and 14 had a rectangular plan, while the rest had hybrid floor plans. The visual survey reveals that out of 41 mosques studied, 24 mosques are categorised as belonging to the *tajug* model, with 22 of them having square plans, while two had rectangular plans (Figure 6-3 to 6-5)[102].

[102] For detailed information on the mosque plans, please refer to the catalogue of each mosque in Chapter 5. The grouping of mosque plans according to their building typology in this section is to demonstrate the similarities of mosques within the same typology category, and their distinctive characteristics when compared to mosques of other typologies.

***TAJUG* MODEL (15th–16th CENTURY MOSQUES)**	
	
Mosque: Sunan Ampel, Surabaya Function: Tomb Mosque Building Type: Vernacular – Two Tiered Pyramidal On 36 Pillars Configuration	Mosque: Sendang Duwur,Lamongan Function: Tomb Mosque/ Community Building Type: Vernacular – Two Tiered On 16 Pillars, Slab On Ground
	
Mosque: Sunan Giri, East Java Function: Tomb Mosque Building Type: Vernacular – Three Tiered Pyramidal, 36 Pillars Configuration, Slab On Ground	Mosque: Mantingan, Central Java Function: Tomb Mosque Building Type: Vernacular – Three Tiered Pyramidal On 24 Columns Configuration, Slab On Ground

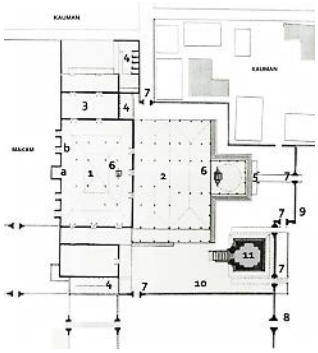
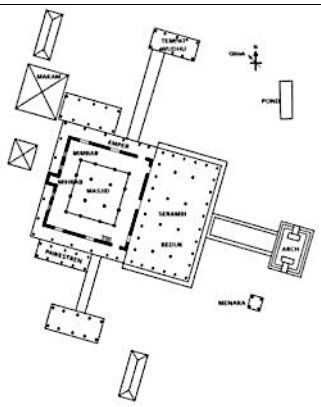
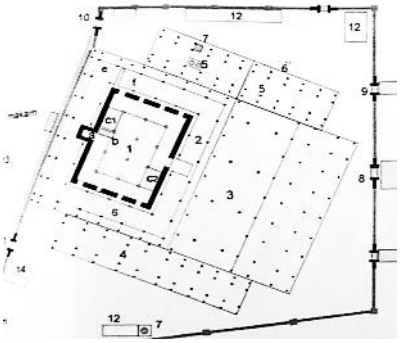
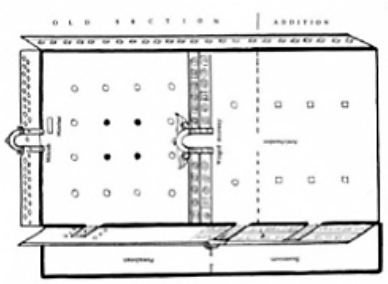
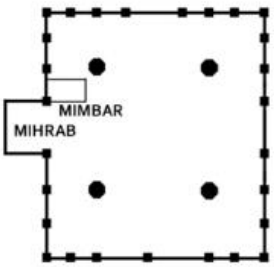
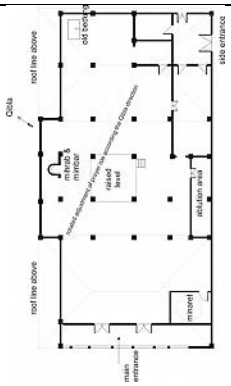
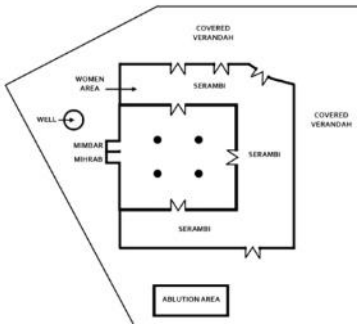
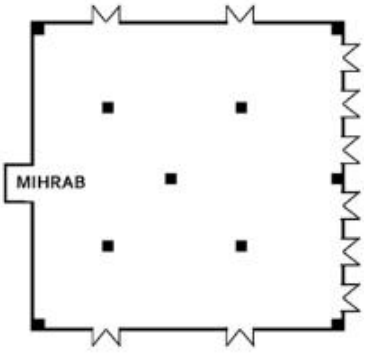
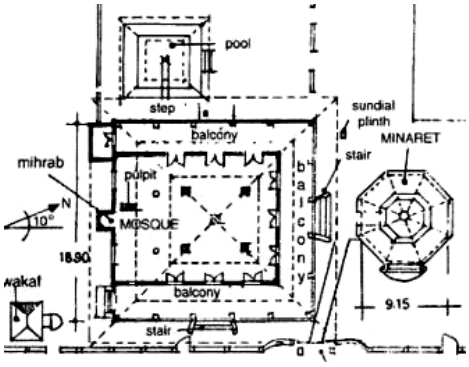
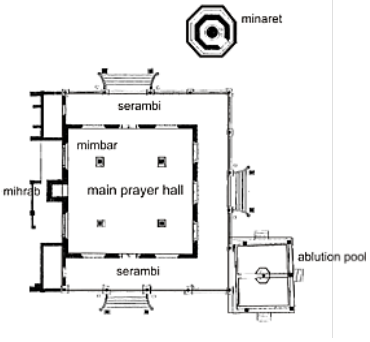
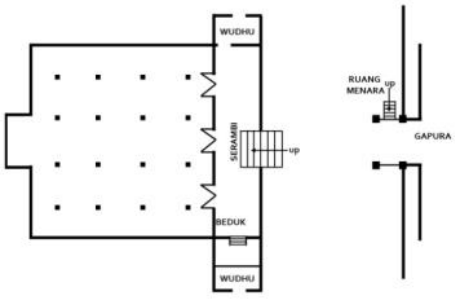
	
Mosque:Menara Kudus, Central Java Function: Principal/ Tomb Mosque Building Type: Vernacular – Three Tiered Pyramidal On 36 Pillars Construction	Mosque: Agung Demak, Central Java Function: Sultanate Mosque/ Tomb Mosque Building Type: Vernacular – Three Tiered Pyramidal On 36 Pillars Construction
	
Mosque: Agung Banten, West Java Function: Sultanate Mosque Building Type: Vernacular – Five Tiers Pyramidal On 36 Pillars Configuration	Mosque: Agung Cirebon, West Java Function: Sultanate Mosque Building Type: Vernacular – Three Tiers Gable On 30 Pillars Configuration, Rectangular Plan
	
Mosque: Merah Panjunan, Cirebon Function: Community Mosque Building Type: Vernacular – Two Tier Pyramidal With Umbrella Roof Structure	Mosque: Bayan Beleq, Nusa Tenggara Function: Community Mosque Building Type: Vernacular – Two Tier Pyramidal With 4 Main Pillars And 28 Perimeter Pillars

Figure 6-3 Typology study on mosque plans of *tajug* prototype (15th–16th century).

***TAJUG* MODEL (17th–18th CENTURY MOSQUES)**	
	
Mosque: Al-Mansur, Jakarta Function: Community Mosque Building Type: Vernacular – European	Mosque: Kg Baru, Jakarta Function: Community Mosque Building Type: Vernacular – 2 Tier Pyramidal
	
Mosque: Palopo Sulawesi Function: Community Mosque Building Type: Three Tiered Pyramidal Roof On Soko Tunggal And Four Supporting Columns, Slab On Ground	Mosque: Tengkera, Melaka Function: Principal/ Community Mosque Building Type: Vernacular – Two Tiered Pyramidal Roof, Slab On Ground
	
Mosque: Kg. Hulu, Melaka Function: Community Mosque Building Type: Vernacular – Two Tiered Pyramidal Roof, Slab On Ground	Mosque: Sultan Ternate, North Maluku Function: Sultanate Mosque Building Type: Vernacular – Four Soko, 12 Supporting, Seven Tiered Pyramidal, Raised Compacted Foundation

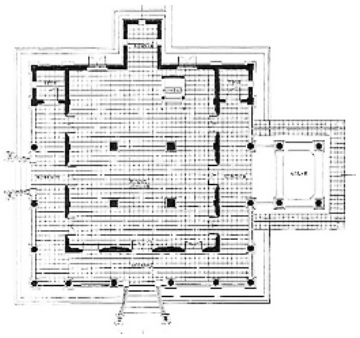
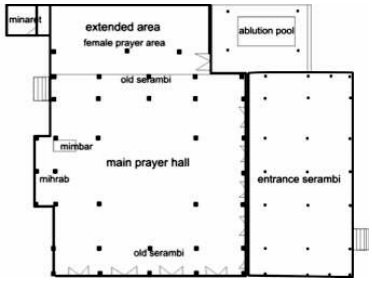
***TAJUG* MODEL (17th–18th CENTURY MOSQUES)**	
	
Mosque: Kg Keling, Melaka Function: Community Mosque Building Type: Vernacular – Two Tiered Pyramidal, Slab On Ground	Mosque: Kg. Laut, Kelantan Function: Principal/ Community Mosque Building Type:Vernacular – Two Tiered Pyramidal On Stilts

Figure 6-4 Typology study on mosque plans of *tajug* prototype (17th–18th century).

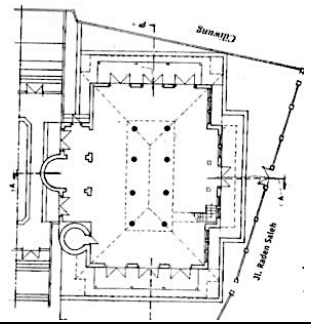
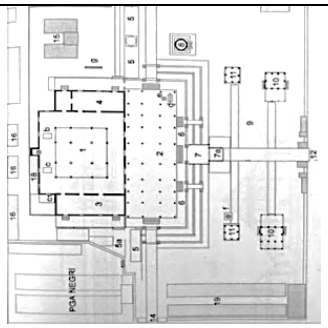
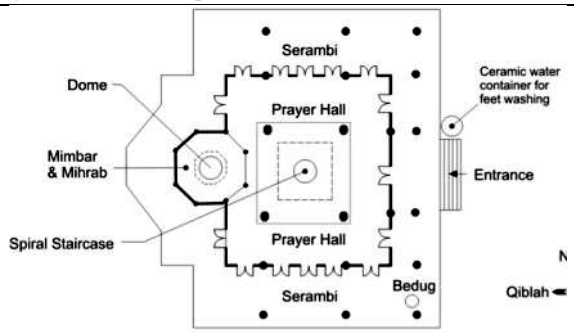
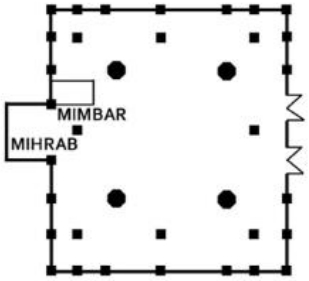
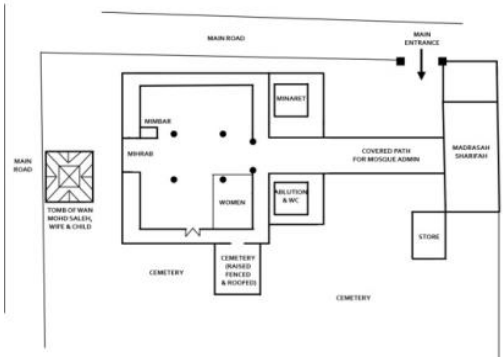
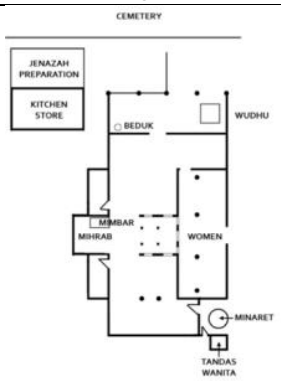
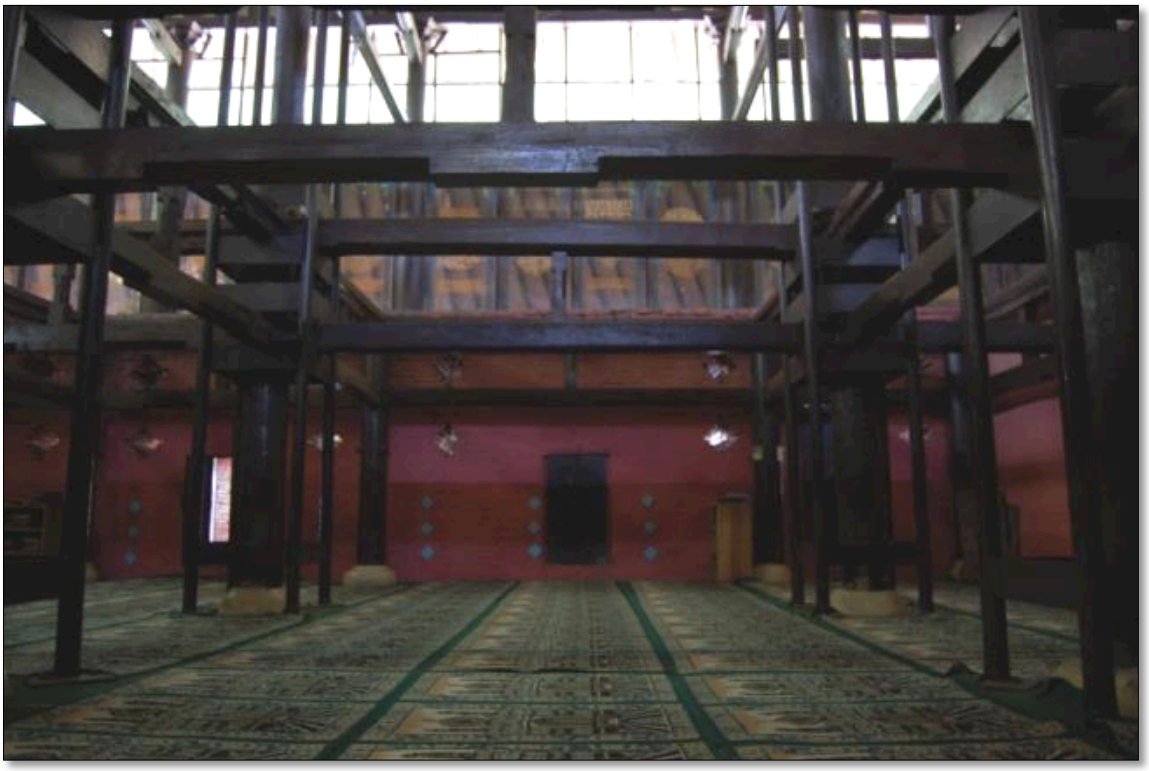
<table>
<tr><th colspan="2">*TAJUG* MODEL (19th–20th CENTURY)</th></tr>
<tr><td>  </td><td>  </td></tr>
<tr><td>Mosque: Al-Makmur Cikini, Jakarta
Function: Community Mosque
Building Type: Vernacular – Two Tiered Hip Roof With Pyramidal Gable Top/ Cement Rendered Walls</td><td>Mosque: Agung Surakarta
Function: Sultanate Mosque
Building Type: Vernacular – Three Tiered Pyramidal 36 Pillars Configuration</td></tr>
<tr><td> 
</td><td> 
</td></tr>
<tr><td>Mosque: Pusaka Kalimantan
Function: Community Mosque
Building Type: Vernacular With Variation – 16 Pillars Configuration</td><td>Mosque: Agung Pondok Tinggi, Sumatera
Function: Principal/ Community Mosque
Building Type: Vernacular – Three Tier Pyramidal Roof With 36 Pillars Configuration</td></tr>
<tr><td> 
</td><td> 
</td></tr>
<tr><td>Mosque: Paloh, Perak
Function: Community Mosque
Building Type: Vernacular – Colonial Three Tier Pyramidal, Slab On Ground</td><td>Mosque: Batak Rabit, Perak
Function: Community Mosque
Building Type: Vernacular – Three Tier Pyramidal, Slab On Ground</td></tr>
</table>

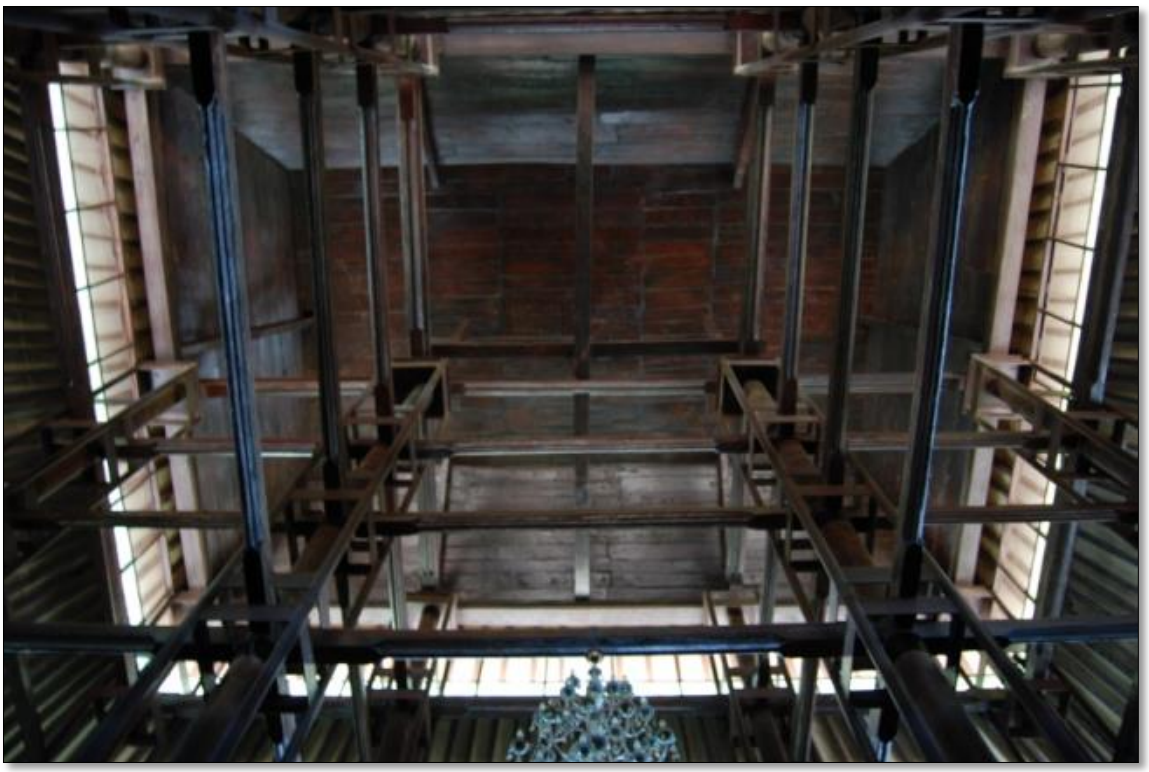
Figure 6-5 Typology study on mosque plans of *tajug* prototype (19th–20th century).

Mosques with rectangular plans are Masjid Agung Cirebon Kasepuhan (16th century) and Masjid Al-Makmur Jakarta (19th century). Both of these mosques have tiered gable roofs instead of pyramidal. However, Masjid Agung Cirebon Kasepuhan is much bigger in size, with three tiered gable roofs built on 12 main pillars supporting the uppermost roof layer, 18 medial pillars supporting the second roof layer and perimeter columns supporting the lowest roof level, which covers the *emper* (passageway) surrounding the main hall area. The main pillars of Masjid Agung Cirebon Kasepuhan are arranged in three rows parallel to the *qibla* wall, with each row having four pillars. Masjid Al-Makmur Cikini Jakarta is a two-tiered gable roof supported by eight pillars arranged in two rows. The perimeter walls are currently made of cement-rendered brick walls.

In both of these mosques, the main pillars are not made of solid wood pieces reaching to the heights of the uppermost roof level. Instead, each main pillar is constructed of two parts: the base and the top. In Masjid Agung Cirebon Kasepuhan, the diameter of the main pillars is approximately 35 centimetres, with the height of the base reaching to approximately 2.3 meters. At this height the main pillars are connected to each other by tie beams forming rigid structures, and another pillar of smaller diameter is placed on top of the base to support the roof structure (Figure 6-6). Sutrisno Murtiyoso (2007) suggests that it was possible that Masjid Agung Cirebon Kasepuhan originally had an upper level built to accommodate people performing *I'tikaf*. It may have been constructed following the Malay house typology, with the floor level elevated above the ground (Sutrisno, 2007, p. 37).



(A)



(B)

(A) TIE BEAMS JOINING THE MAIN PILLARS (B) ADJOINING COLUMNS SUPPORTING THE ROOF STRUCTURE.

Figure 6-6 Masjid Agung Cirebon Kasepuhan

The design of Masjid Al-Makmur Cikini provides a possible insight into the problem (Figure 6-7). The main pillars of Masjid Al-Makmur Cikini support an elevated platform that looks like a *dikka*. From this platform, another set of pillars continues to the upper roof level, supporting the main roof frames. In Masjid Agung Cirebon Kasepuhan, platforms may have existed in its original design, as the ample spaces beneath the roof may well have been utilised for various functions of the mosque. The results of the survey, however, do not indicate the employment of such a design (i.e., the existence of upper levels to the mosques) in any of the *tajug* mosques studied. As the samples are mainly collected from Javanese and Malay Peninsula mosques, this suggests that multi-storey mosques are not a prominent feature in either of the regions.

All of the mosques belonging to the *tajug* prototype in this survey are single-storey buildings, despite the existence of double to triple storey volumes in principal mosques such as the Masjid Agung Cirebon, Masjid Agung Surakarta and Masjid Sultan Ternate. In all of these mosques, the space underneath the roof is primarily used to accommodate the roof structures, which in many cases gives the mosque its unique aesthetic quality. It cannot be ascertained at this stage whether the same can be applied to other mosques in the region. Van Dijk (2007) cited a passage from *De Indische Gids 10* (1888), whereby a Malay school teacher observed that, in the past, West Sumatran mosques used to have three storeys, with the uppermost storey used as a place to proclaim the *adhan*. However, he noted that since the introduction of *manurah* (minaret), roof height was reduced to one or two storeys (Dijk, 2007, p. 58). The terminology ‘storey’ here is dubious, as it may have referred to the roof tiers, as there was no indication to suggest if the other storeys were also functional spaces.

Figure 6-7 Platform in Masjid Al-Makmur Cikini, Jakarta.

The *tajug* configuration allows for a mosque to be quickly identified based on its size. In general, large mosques are built with a minimum of 36 columns (including *soko guru*) supporting two to seven roof layers, with the columns' layout made up of 4 principal columns, 12 medial columns and 20 perimetral columns. The 36-column configuration found in large mosques provides a floor area of approximately 20 by 20 meters. Medium mosques are usually found in the size of 15 by 15 meters, while small mosques or *langgar* are usually in the size of 10 by 10 meters (Sutrisno, 2007, p. 35).

This is critical information, as it allows the present study to classify the mosques according to their sizes. Mosques that are considered to be large mosques of *tajug* prototype are Masjid Sunan Ampel (15th century), Masjid Sunan Giri (16th century), Masjid Menara Kudus (16th century), Masjid Agung Demak (15th century), Masjid Agung Banten (16th century), Masjid Agung Cirebon Kasepuhan (15th century), Masjid Kampung Laut (18th century), Masjid Sultan Ternate (18th century), Masjid Agung Surakarta (19th century) and Masjid Agung Pondok Tinggi (19th century). Their architectural configurations rationally coincide with them being the *Masjid Agung* (Grand Mosques) or principal mosques of their localities.

Medium size mosques are Masjid Sendang Duwur (16th century), Masjid Mantingan (16th century), Masjid Merah Panjunan (15th century), Masjid Al-Mansur (18th century), Masjid Kampung Baru (18th century), Masjid Palopo (18th century), Masjid Tengkera (18th century), Masjid Kampung Hulu (18th century), Masjid Kampung Keling (18th century), Masjid Al-Makmur Cikini (18th century), Masjid Pusaka Kalimantan (19th century), Masjid Paloh Perak (19th century) and Masjid Batak Rabit Perak (19th century).

According to Sutrisno (2007), up until the middle of the 20th century, and mainly in Java, Friday mosques were only built in the large mosque configuration. Medium size mosques were used for daily congregational prayers but not for Friday prayers, while small mosques were not usually used for organised congregational prayers. This information is critical, as it reveals the mosque typology by function. Large mosques can be categorised as falling into the principal mosque type (i.e., *masjid jami'*). Medium size mosques can be categorised as *masjid 'amiyya* (community mosques), while smaller mosques are of the private mosque category.

In Cirebon, for example, a study done on three mosques that are found within a radius of one kilometre from each other – Masjid Agung Cirebon Kasepuhan, Masjid Merah Panjunan and Langgar Alit Kasepuhan – suggests that such formal classifications for congregational prayers may have taken place in the traditional city. Masjid Agung Cirebon served as the principal mosque (*masjid jami'*), as it held Friday prayers, *'Id* prayers and major celebrations in Islam. Masjid Merah Panjunan (15th century), which has the size of a medium mosque, was used as a community mosque (*masjid 'amiyya*) whereby only congregational prayers were held, while on Fridays the people of the locality had to go to the Masjid Agung.

According to an interview held with the mosque keeper of Masjid Merah Panjunan, the mosque is not used for Friday prayers, but is opened for the annual *'Id* prayers (so as to protect the original part of the mosque from further damage) (Figure 6-8). However, the information on the mosque's classification elucidates the original functions of the mosque within its locality, and the primary reason why it was not known to traditionally organise Friday prayers.

Figure 6-8 Masjid Merah Panjunan Cirebon
The original part of the mosque that is closed for daily prayers.

Within the complex of the Cirebon palace is a small prayer structure known as Langgar Alit. It was built by Cakrabuana at the end of the 15th century and is the oldest *soko tunggal* structure known on Java Island. Built with one central pillar and 12 perimetral columns supporting a two-tiered pyramidal roof structure, Langgar Alit was used by the sultan for religious occasions such as the commemoration of *Nuzul Qur'ān* (revelation of the Qur'ān), *Isra' and Mi'raj*[103], as well as the annual distribution of alms before the *'Id* prayers (Sutrisno, 2007). As it is not used for organised collective prayers, the sides of the *langgar* are left open, and it stands without the basic mosque elements such as the *mihrab* and *mimbar* (Figure 6-9).

[103] The journey of the Prophet Muhammad (S) to Jerusalem and his ascendance to the seventh heaven.

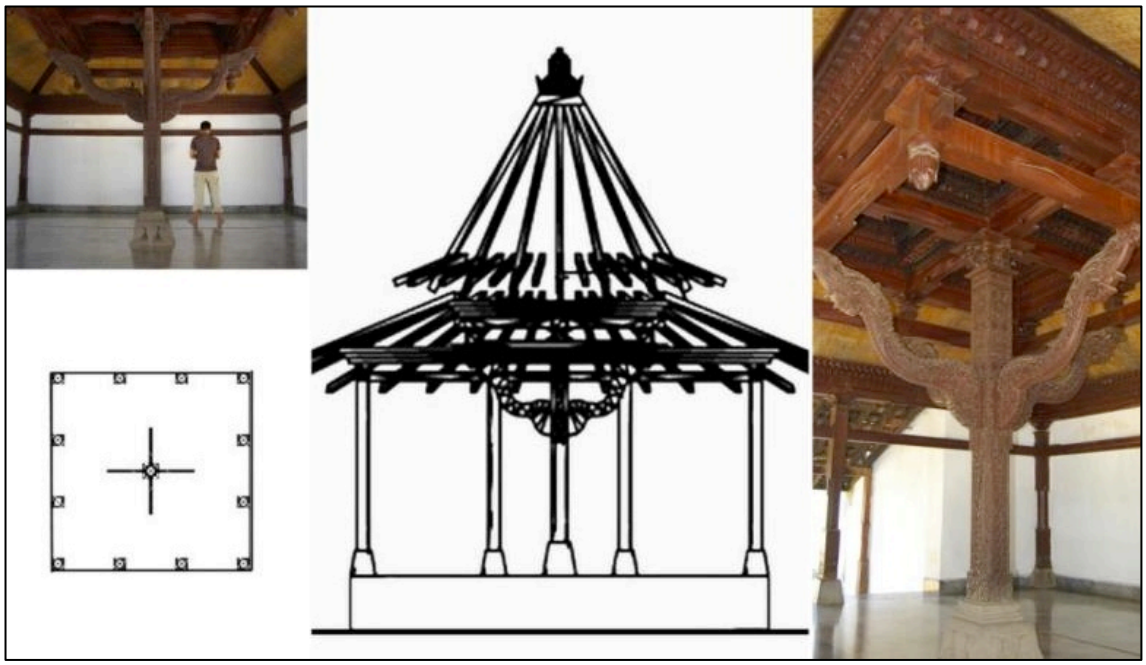


Figure 6-9 Langgar Alit, Kompleks Keraton Kasepuhan Cirebon.

6.2.2 *Serambi* and *Emper* Profiles

The partially covered area underneath the roof overhang surrounding the main hall of the *tajug* prototype is called *emper* (Figure 6-10). It is a semi-enclosed space with the extension of the roof line to the edge of the floor area, and is commonly used as a thoroughfare from one part of the mosque to the other, and sometimes as a resting place. In traditional Javanese houses, *emper* is treated as an external veranda used for casual and public activities (Tjahjono, 1999, p. 35).

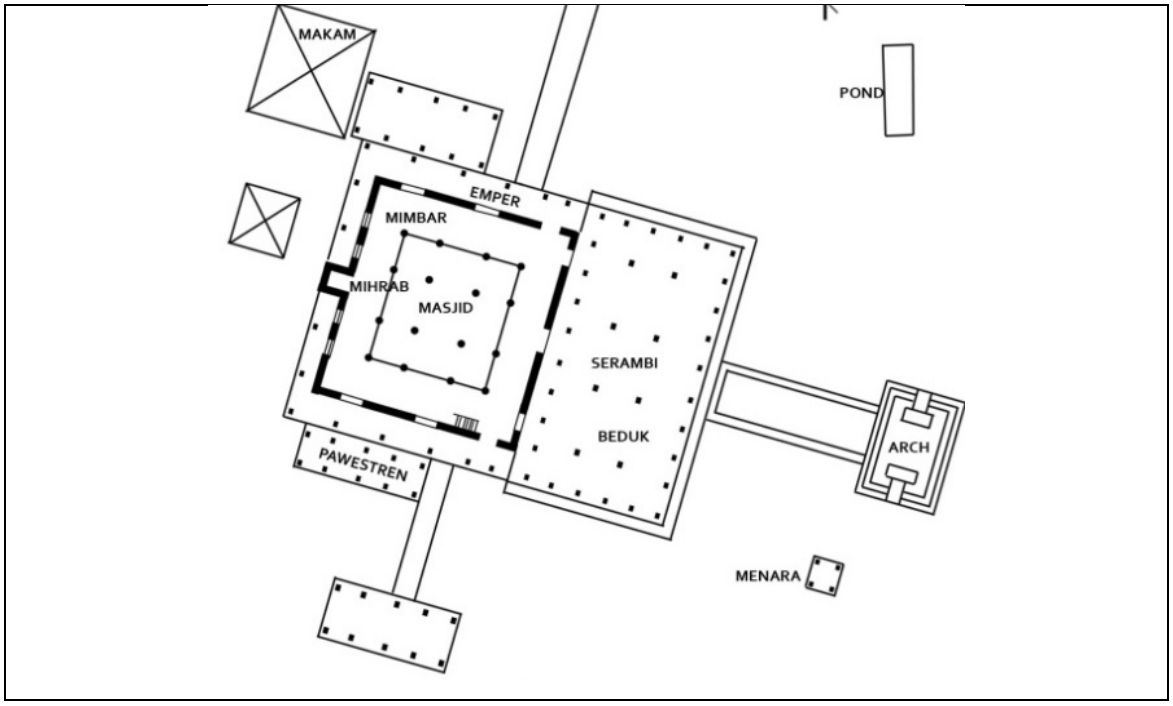
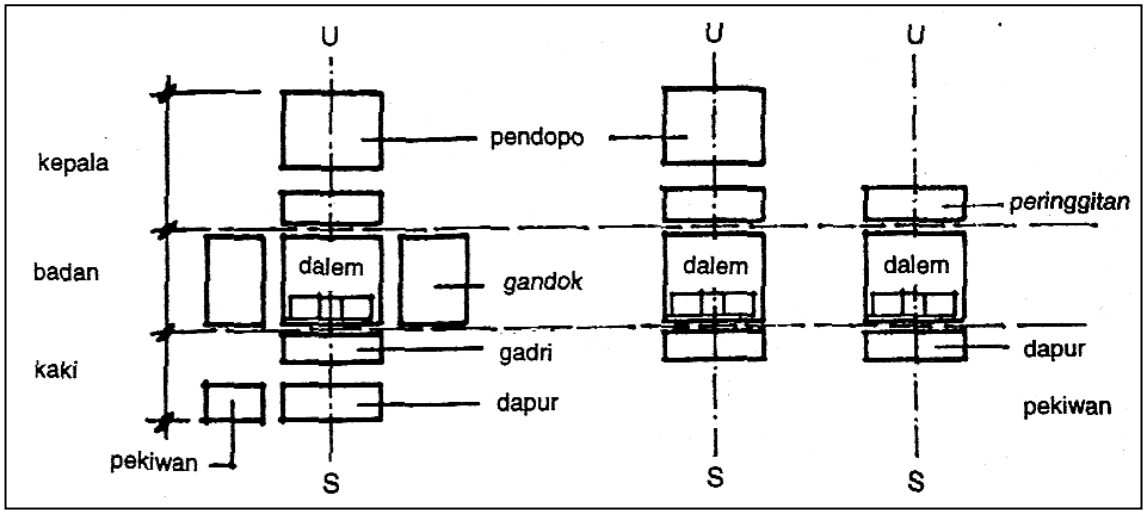


Figure 6-10 Floor plan of Masjid Agung Demak: The difference between an *emper* and *serambi*.

As the *tajug* model produces non-loadbearing walls, upgrading works performed on these mosques often witness the merging of the *empe*r with the main hall. As a consequence, in mosques that have undergone extensive renovations, many of the *mihrab* and *qibla* walls are newly introduced and are not of the original structures (such as the *maharib* of Masjid Sunan Ampel, Masjid Sendang Duwur, Masjid Sunan Giri, Masjid Mantingan, Masjid Menara Kudus, Masjid Al-Mansur, Masjid Kampung Baru and Masjid Al-Makmur Cikini). Similarly, after assessing the construction materials employed in the three oldest Malay Peninsula mosques in Melaka, it was found that the *maharib* of the Masjid Tengkera Melaka, Masjid Kampung Keling and Masjid Kampung Hulu are also not original.

The *serambi* (veranda), on the other hand, is a free-standing structure built in the architecture of a traditional Javanese house, in the forms of *joglo* or *limasan*. The *serambi* essentially inherits its concept and form from *pendopo*, the front pavilion of a traditional Javanese house and palace. In traditional Javanese house spatial arrangement, the *pendopo* is located in the head zone (*kepala*), with the core of the house (*dalem* or *omah*) placed in the centre (*badan*) and the services area such as a kitchen placed at the foot (*kaki*) (Figure 6-11). The *pendopo* serves as a reception hall, a place where the members of the house socialise with visitors and organise traditional feasts and

celebrations. It is placed in a semi-public zone and it serves as a marker to the status of the house owner (Maria, 1999, pp. 37–9). A similar concept finds its echo in the *'anjung'* and its adjoining space *'serambi'* of a traditional Malay house.



SOURCE (FRICK, 1997: 87)

Figure 6-11 The variations of spatial planning in traditional Javanese house.

With the exception of Masjid Al-Makmur Cikini (18th century), which has undergone massive extensions, all of the mosques employing the *tajug* model in Java were built with the *serambi* structure added mainly on the eastern façade (i.e., entry façade). Minor *serambis* are usually added to the north and west of the main prayer hall. The *serambi* is found in all of the *tajug* mosques surveyed, and therefore is accepted as being a basic element in the *tajug* mosque prototype.

In Javanese mosques, the term *serambi* consistently denotes the pavilion-like structure (*pendopo*) added as an extension to the main building of the *tajug* model. However, outside of Java, the term *serambi* is also applied to the space beneath the roof projections to form a partially covered space that surrounds the main prayer hall. Despite the difference in construction techniques, the term *serambi* is used profusely in Island Southeast Asian mosques for the veranda-like area outside of the main prayer hall. Mosques that have *pendopo*-like *serambis* are the 15th–16th century mosques of Masjid Agung Demak, Masjid Sunan Giri, Masjid Agung Banten, Masjid Menara Kudus, Masjid Agung Cirebon, Masjid Mantingan and Masjid Merah Panjunan, as well as Masjid Agung Surakarta (19th century). Mosques that have *serambi* as the result of

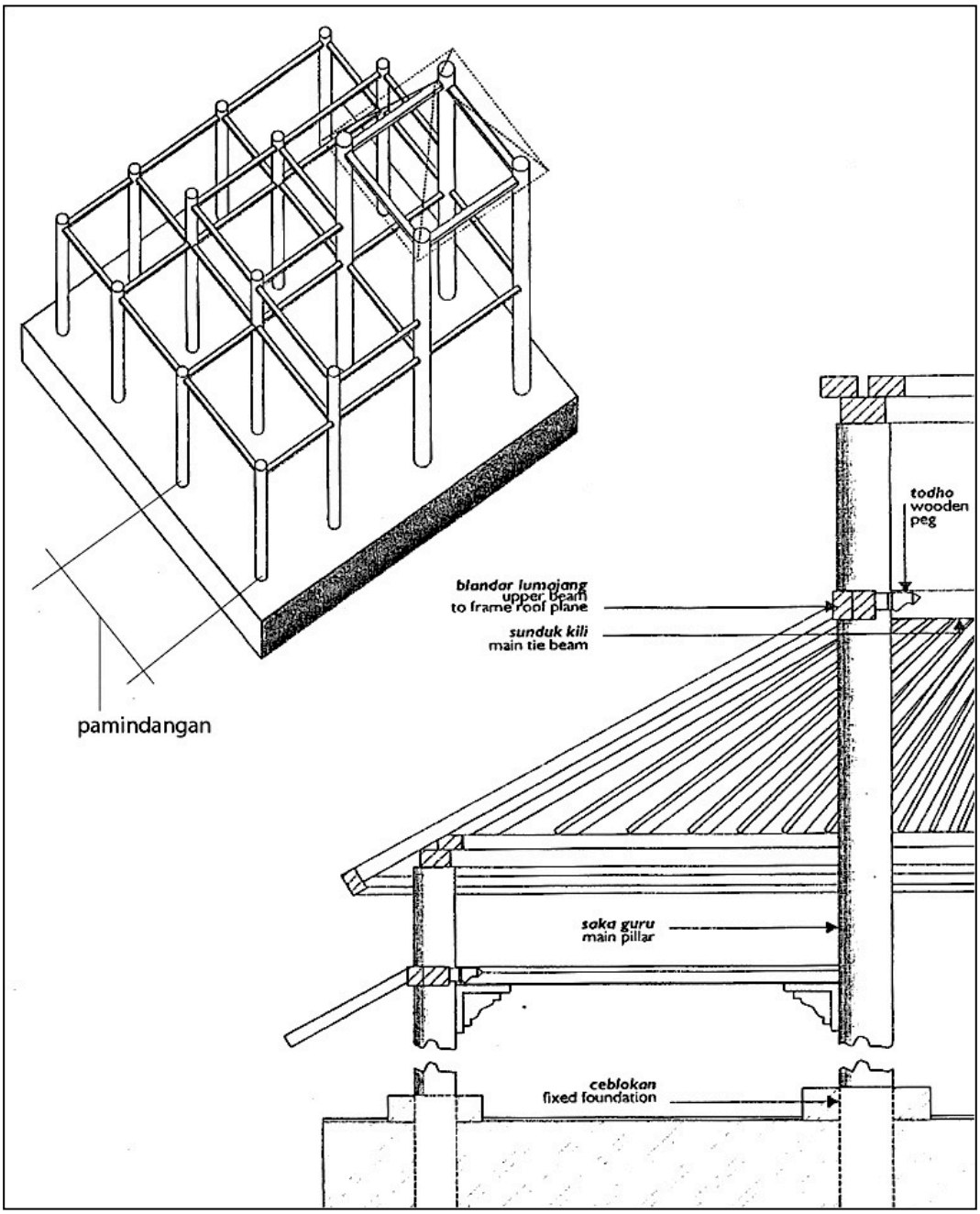
extended roof lines are Masjid Sendang Duwur (15th century), Masjid Kampung Baru Jakarta (18th century), Masjid Tengkera (18th century), Masjid Kampung Hulu (18th century), Masjid Kampung Keling (18th century), Masjid Sultan Ternate (17th century), Masjid Pusaka Kalimantan (19th century) and Masjid Paloh Perak (19th century).

6.2.3 Construction Techniques

6.2.3.1 Main Prayer Hall Structure

In a typical *tajug* structural configuration, the four central *soko guru* are placed at the centre to support the uppermost roof layer. As the floor area required gets bigger, *soko rawa* (medial pillars) will be placed in the outer layer of the central square, giving the mosque a typical 4 *soko guru* and 12 *soko rawa* configuration. Auxiliary pillars are added in bigger mosques and they define the boundary of the prayer hall. The principal pillars are arranged at equidistant points, forming a square between them. They are connected and strengthened by tie beams (*blandar* and *pengerat*) forming a rigid structural system.

Traditionally, the unit square (or the bay) defined by the connections of the tie beams to the main pillars is called *pamindangan* and is used as the measuring convention to determine the size of the mosque's floor area (Frick, 1997, pp. 78–9). In Javanese building culture, the dimensions of public halls and religious buildings employing the *tajug* model adhere to a unique traditional convention known as *Gana*, which is a measuring method made of multiples of three, in addition to the basic *pamindangan* unit, which is multiples of five. This measuring convention produces accepted sizes of structural bays (*pamindangan*) to be 8 (5+3), 13 (10+3), 18 (15+3) and so on (Figure 6-12).



EDITED FROM (SANTOSO, 2000)

Figure 6-12 The *soko guru* structural system in the main hall.

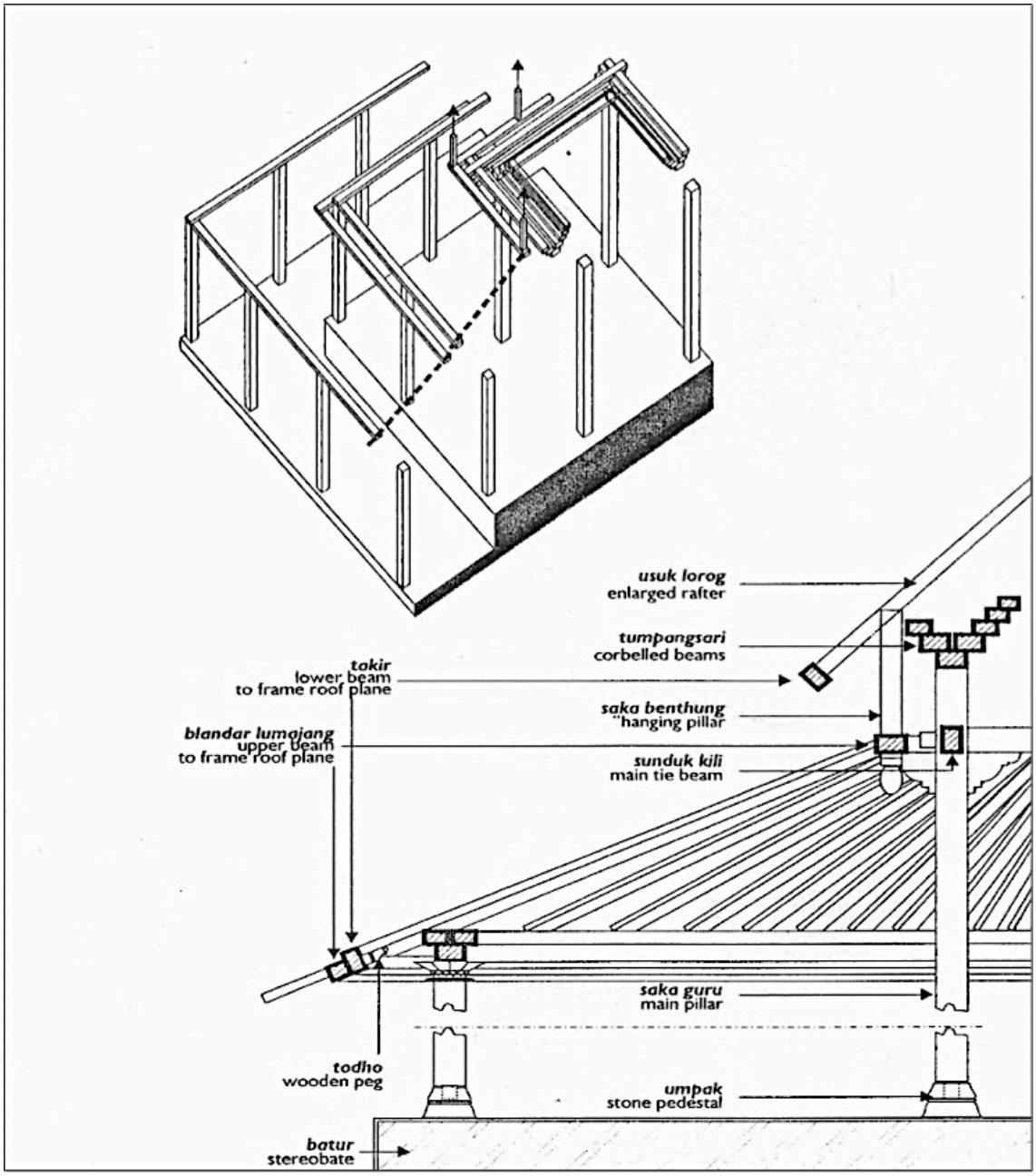
The jointing technique used in this construction system is called *purus* (i.e., knock-down system), which is known for the absence of nails and its ease of dismantling when required. The original method of constructing the *tajug* is usually *tajug ceblokan lambang teplok*, where *tajug* is the pyramidal roof form, *ceblokan* refers to the foundation system whereby the bases of the main pillars are buried underneath the ground, and *lambang teplok* refers to the 'attached joints' construction system of the roof. The *tajug* construction is typically achieved through the arrangement of the four

main pillars in equal distance forming a square, and they are connected by two layers of tie beams. A pair of beams crossing at right angles is placed on the upper tie beams to support a king post, which holds the peak of the topmost roof. At this level, roof rafters are arranged in a radiant pattern centred at the peak, forming an umbrella-like structure.

Lambang teplok indicates a particular shape and system of structural rigidity of the roof, with the lower rafters firmly attached to the principal construction (R. Santoso, 2000). The upper purlins of the secondary roof and the tie beams of the principal pillars are held together using wooden pegs and then fastened with iron plates, to form a rigid structure allowing the load to be effectively transferred from roof to ground. The rigidity of the system is essentially reinforced by tie beams, which hold the principal columns together by binding the main pillars with the medial pillars and the medial with auxiliary pillars. In this structural configuration, the perimetral columns serve as buttresses for the core structure, protecting them against deflection (R. Santoso, 2000). Such a system of structural rigidity echoes the structural configuration found in traditional tall structures such as the Chinese pagoda and the Hindu-Javanese *meru*, which were probably the origins of the building practices in mosque constructions.

6.2.3.2 *Serambi* Structure

The serambi structural system typically belongs to *limasan lambang gantung*, where *limasan* is a hipped roof form, and *lambang gantung* refers to the jointing technique between the topmost roof layer and the secondary layer. The principal columns in *serambi* are arranged in pairs forming an overall rectangular core. Similar to the arrangements of the *soko guru*, the principal columns are held together by tie beams binding the array of columns together. On top of these principal columns, beams are arranged in layers forming corbels, looking like a pyramid beneath the topmost roof layer (*brunjung*). The layer of beams is called *tumpangsari*, which acts as a resisting structural component against the lateral tension of the central structure. In contrast to the system employed in the *tajug* construction, the tie beams in the *serambi* only brace the principal columns forming the structural core. The secondary layer of roof is 'hung' from this core, from which the term *'lambang gantung'* (hung joints) originates (Figure 6-13.



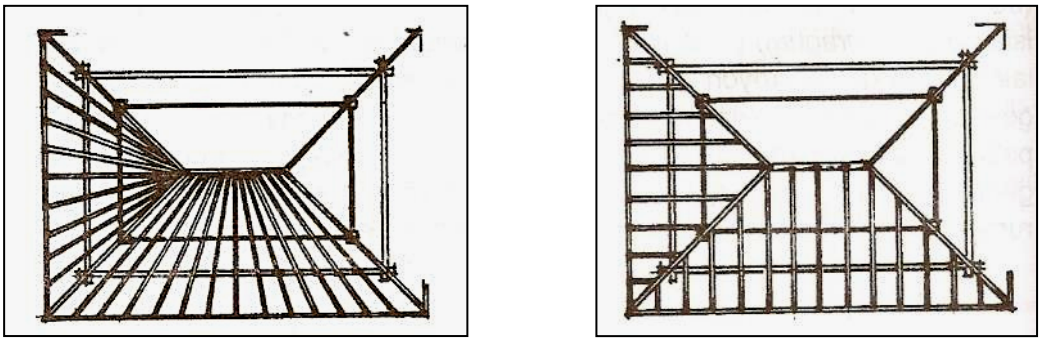
EDITED FROM (SANTOSO, 2000)

Figure 6-13 Basic structural system of the *serambi*.

Mosques surveyed with *serambi* generally have *joglo* (gable on hip) roof, with the exception of Masjid Agung Demak, which has been renovated and has a *limasan* (gable roof) *serambi.* The *tumpangsari* method of construction is only found in Masjid Mantingan (15th century) and Masjid Agung Cirebon Kasepuhan (16th century). This is believed to be an old and original technique (Frick, 1997, pp. 116–21), in contrast to the popularly employed technique of 'A' frame with king post method seen in the mosques

of Masjid Merah Panjunan (15th century) and Masjid Agung Surakarta (18th century), which led to the belief that the *serambi*s in these mosques haven't been upgraded.

The roof rafters in both the *tajug* and *serambi* can be arranged in one of two ways: *usuk memusat* (concentric) or *usuk sejajar* (parallel) arrangements (Figure 6-14). In the mosques surveyed, only Masjid Merah Panjunan (15th century) and Masjid Agung Surakarta (19th century) have pyramidal roofs with rafters arranged in concentric patterns, thereby emphasising the vertical apex of the mosques.



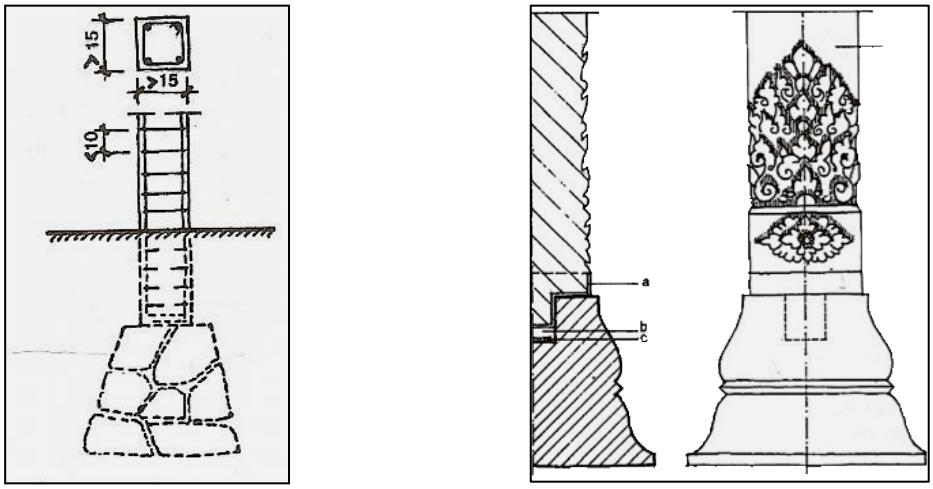
(A) (B)

SOURCE: (FRICK 1997, P. 124)

Figure 6-14– (a) *Usuk Memusat* (concentric) and (b) *Usuk Sejajar* (parallel) roof purlins arrangements

6.2.3.3 Foundation

There are two types of foundations employed to the *tajug* archetype: the *ceblokan* (buried pile foundation) and the *umpak* (stone pedestal above ground) systems. According to Heinz Frick, the *ceblokan* system is usually employed in secondary buildings (Frick, 1997, pp. 161–3). As wooden posts are vulnerable to fungus, termite and dampness, employment of this system may cause problems to the structural strength of the building. The other method is the *umpak* foundation, whereby the bottom of the post is buried in a stone pedestal base that is usually made of natural rocks. The stone pedestals come in massive sizes, ranging between 15 by 20 centimetres to 75 by 100 centimetres. The strength of the system relies on the gravity force provided by the *umpak* as well as the structural rigidity of the framing system (Figure 6-15 and 6-16)[104].

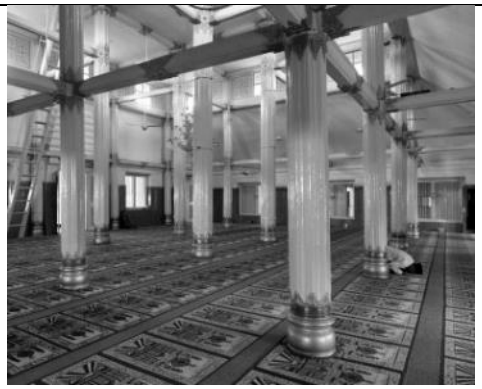


(A) (B)

EDITED FROM (FRICK, 1997).

Figure 6-15 Difference between *ceblokan* (A) and *umpak* (B) foundation systems.

[104] For detailed information and visual information of each mosque, please refer to Chapter 4, which contains mosque catalogue and relevant information on each mosque. The figures here (Figure 6-15 and 6-16) are associated with a typological study on formative aspects of the mosque and serve to compare the different constructional techniques and foundation system used in the main hall and the *serambi* areas.

MOSQUE	MAIN HALL	*SERAMBI* DETAILS
SUNAN AMPEL		
CONSTRUCTION	PYRAMIDAL ON *UMPAK*, PARALLEL ROOF RAFTERS	NEW CONSTRUCTION
SUNAN GIRI		
CONSTRUCTION	PYRAMIDAL ON *CEBLOKAN* FOUNDATION, CEILING LINING FINISH	NEW CONSTRUCTION – RECTANGULAR COLUMNS SUPPORTING POINTED ARCHES
MANTINGAN		
CONSTRUCTION	PYRAMIDAL ROOF ON *UMPAK* FOUNDATION, PARALLEL RAFTERS	GABLE ON HIPPED ROOF, *TUMPANGSARI* (CORBEL BEAMS) ON *UMPAK* FOUNDATION, PARALLEL RAFTERS

MOSQUE	MAIN HALL	*SERAMBI* DETAILS
MENARA KUDUS		
CONSTRUCTION	PYRAMIDAL ROOF ON *UMPAK* FOUNDATION	MODERN, ROUND CLASSICAL COLUMNS SUPPORTING TRIANGULAR TOP ARCHES
AGUNG DEMAK		
CONSTRUCTION	PYRAMIDAL ROOF ON *CEBLOKAN* FOUNDATION, CEILING LINING	GABLE ROOF ON *UMPAK* FOUNDATION, PARALLEL RAFTERS
AGUNG BANTEN		
CONSTRUCTION	PYRAMIDAL ROOF ON *UMPAK* FOUNDATION, KING POST, PARALLEL RAFTERS	GABLE ON HIPPED ROOF WITH KING POST, ON *UMPAK* FOUNDATION, PARALLEL RAFTERS

MOSQUE	MAIN HALL	*SERAMBI* DETAILS
AGUNG CIREBON		
CONSTRUCTION	PYRAMIDAL ROOF ON *CEBLOKAN* FOUNDATION, PARALLEL RAFTERS, CEILING LININGS	GABLE ON HIPPED ROOF WITH CORBEL BEAMS, ON *UMPAK* FOUNDATION, PARALLEL RAFTERS
MERAH PANJUNAN		
CONSTRUCTION	PYRAMIDAL ON *CEBLOKAN* FOUNDATION, UMBRELLA CONSTRUCTION (NO KING POST), CONCENTRIC RAFTERS.	GABLE ON HIPPED ROOF WITH KING POST ON *CEBLOKAN,* PARALLEL RAFTERS
SULTAN TERNATE		
CONSTRUCTION	PYRAMIDAL ON *UMPAK* FOUNDATION, PARALLEL RAFTERS	NO *SERAMBI* – EXTENDED ROOF LINE

Figure 6-16 Footing system in main hall and *serambi.*

Umpaks are made from natural rocks. They are made heavy and massive, as the structural strength of the buildings rely on them. The size of the *umpak* increases according to the size of the structure it supports. The *umpaks* of Masjid Sunan Ampel and Masjid Sunan Kudus, for example, are octagonal in shape, with heights of between 30 and 40 centimetres. In Masjid Agung Demak, the *umpak* is found in the *serambi,* where the *soko guru* of the *serambi* sits on a square *umpak* to heights of almost 30 centimetres (Figure 6-17).

Figure 6-17 *Umpak* of Masjid Agung Demak.

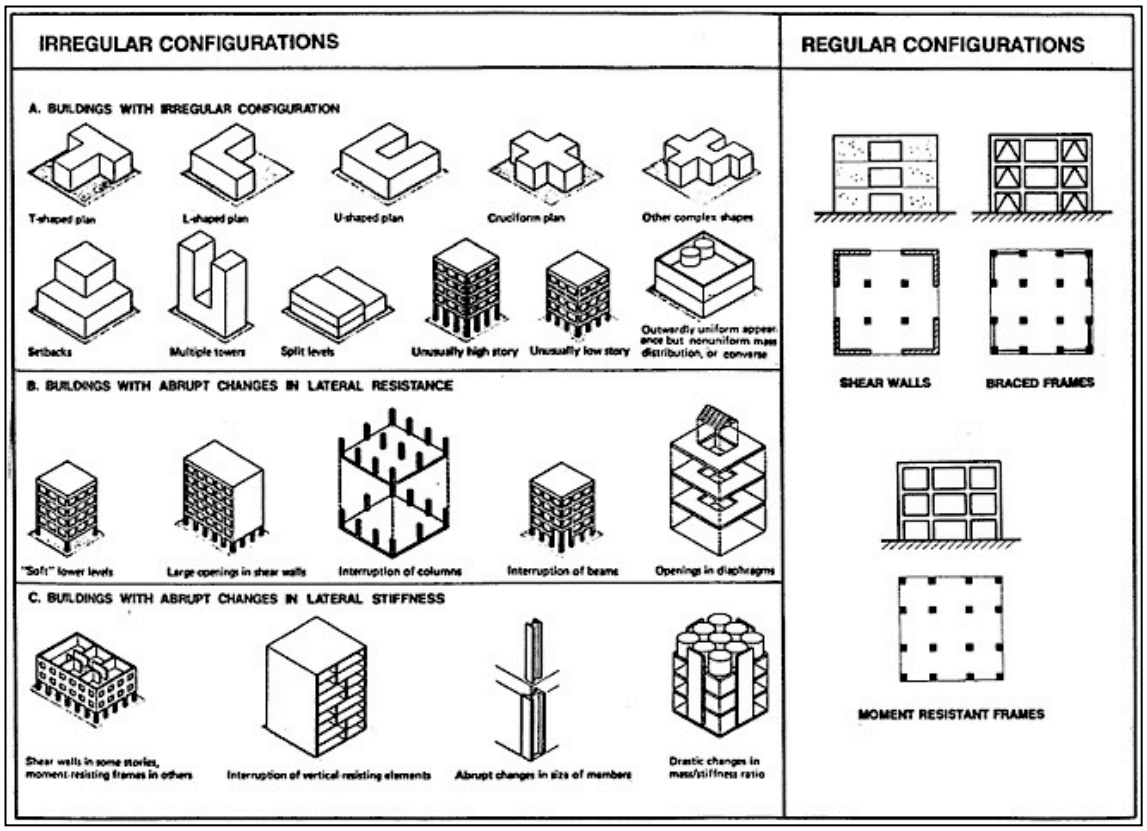
Masjid Agung Banten employed the *umpak* system both in its main hall and *serambi*. The *umpak*s are unique, as they come in five different designs in the shape of pumpkin. In the *serambi*, the *umpak* sits on a stone pedestal almost 50 centimetres high. Other mosques utilising the *umpak* foundation system are Masjid Agung Cirebon (at *serambi*), Masjid Sultan Ternate (in the main hall) and Masjid Mantingan (main hall and *serambi*). This system seems to be a unique aspect of mosques in Java Island, as it is not found in mosques surveyed from other regions.

Figure 6-18 Various designs of *umpak* in Masjid Agung Banten.

The unique combination of the roof form, the square floor plan and the foundation system selected for the mosques in Java Island may well be connected to seismic-efficient design. As the *tajug* model found outside of Java Island varies from the Javanese model in terms of construction techniques, especially with regards to the foundation system, it is highly possible that the *tajug* typology just discussed was uniquely selected in Java due to its seismic design properties.

Gabor Lorant (2010), in presenting basic design principles with regards to seismic-resistant buildings, outlined the criteria required to satisfy seismic design principles. The most fundamental aspect is the building's structural configuration, in which buildings are to have regular configurations as opposed to irregular

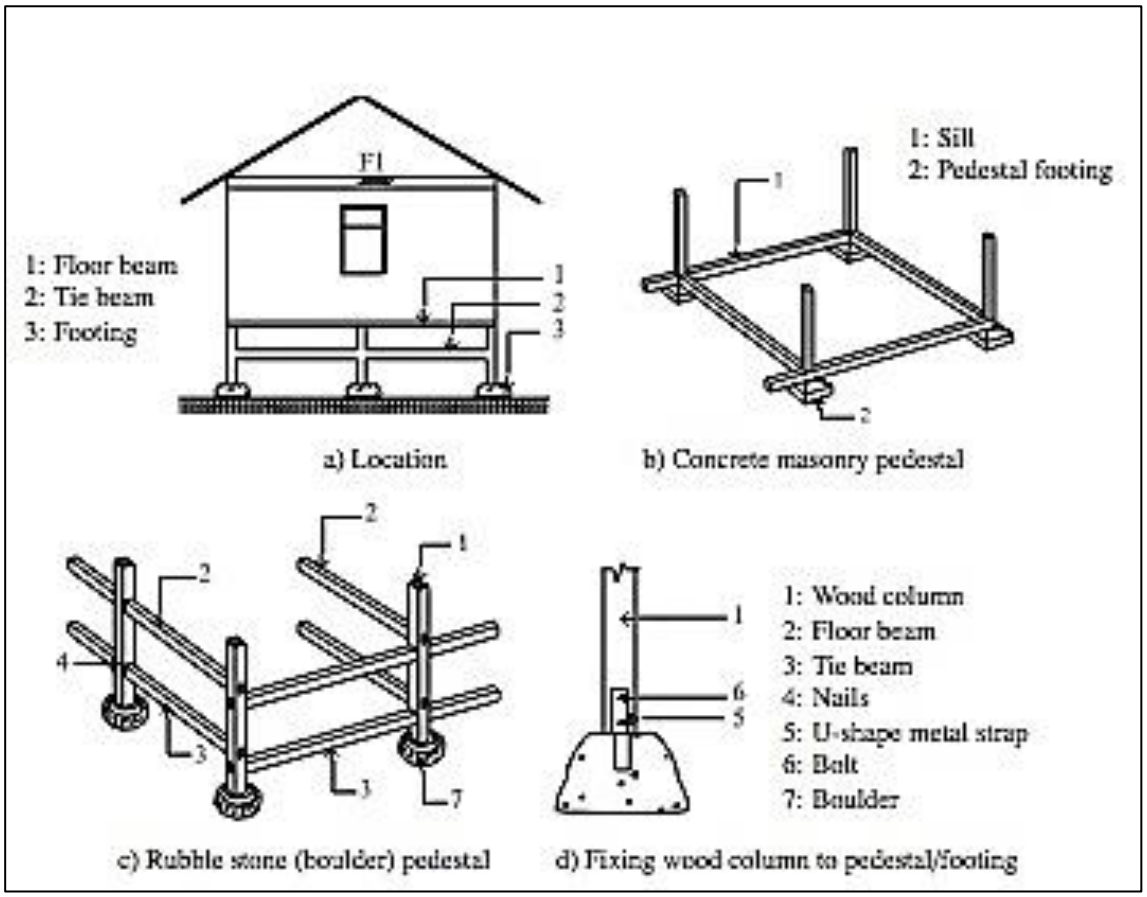
configurations. The *tajug* prototype is found to conform to a regular configuration distinguished by low height to base ratios, equal floor height (in multi-storey buildings), symmetrical plans, uniform sections and elevations, maximum torsional resistance, short spans and redundancy, and direct load paths (Figure 6-19). Irregular configurations are those that differ from the above (Lorant, 2010).



SOURCE: (LORANT 2010, P. 1)

Figure 6-19 Regular and irregular building configuration.

The choice of wood as the main structural material and the method of carrying loads to the ground similarly reflect seismic design properties. Wood is very suitable for earthquake resistant construction, as it has high strength per unit weight (Arya, Boen, & Ishiyama, 2012, p. 64). In the *tajug* model, the claddings of the structure are found to be lightweight, which accentuates its suitability for seismic-resistant construction. In addition, the foundation system with *umpak* footings allows buildings to shift during earthquakes, without collapsing (Figure 6-20).



SOURCE: (ARYA ET.AL, 2012, P. 74).

Figure 6-20 Footing system adopted in Indonesian rural areas.

6.2.4 Mosque's Spatial Planning

The socio-cultural elements of the mosque require that spatial arrangements provide for both sacred and profane activities. As the Prophet's Mosque demonstrates, in addition to the fact that congregational prayer forms the core and elemental aspect of the mosque's spatial design, the social aspects of the mosque are similarly an important component in the mosque's conception. As a consequence of the daily rhythmic meetings of the congregation, the mosque generates social activities that require spatial accommodation to be designed into the mosque's programme even at the planning stage. However, the intensity of the meetings vary according to the occasion. For this simple reason, the mosque's planning needs to accommodate the expansion and contraction of space, as the spaces beside the core structure are expected to be of a multi-purpose nature and convertible when needed. The *tajug*, being the oldest form selected for Island Southeast Asian mosques, requires a critical study on how it responds to the spatial requirements demanded by Islam.

6.2.4.1 Requirement for Expandable and Convertible Spaces

The arrangement of congregational prayers requires the prayer hall to accommodate the expansion of the *saf* in linear directions by providing ample space either parallel to the *saf* lines (i.e., expansion of the length of the *saf)* or parallel to the *qibla* axis (accommodating more *saf,* i.e., expansion in length in the direction of the *qibla* axis). As the *ma'mum* are expected to stand in uninterrupted rows without any gaps in between them, the prayer hall is expected to have minimum physical obstructions that can break the *saf.*

The *tajug*'s structural system produces a square or rectangular planned building, which is the best workable floor shape that satisfies the requirement. In addition, the *soko guru* structural configuration produces a non-loadbearing wall structure with minimum physical barriers and column interruptions, as it allows the roof to span without having unnecessary structures to support it. This configuration is found suitable for *saf* accommodations.

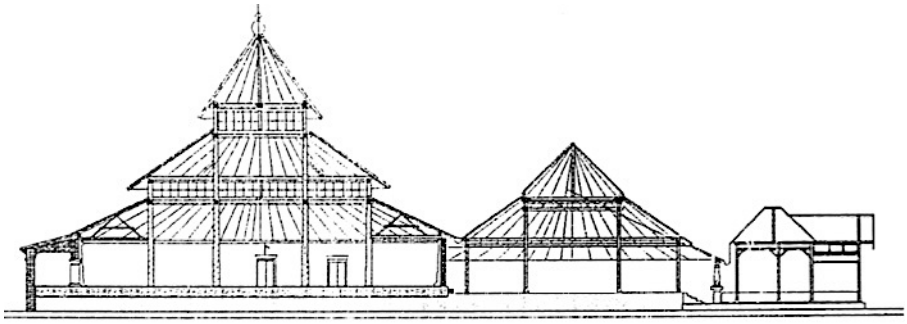
The need for expansion is met through several methods. The *tajug* model can be expandable on all of its sides, either by extending the roof line to create a partially

covered veranda-like space (*emper*), or by introducing additional structure in the form of a *serambi*, which is usually added to the east of the prayer hall as a main antechamber, then, according to needs, to the north and south of the main hall in the forms of smaller *serambis*.

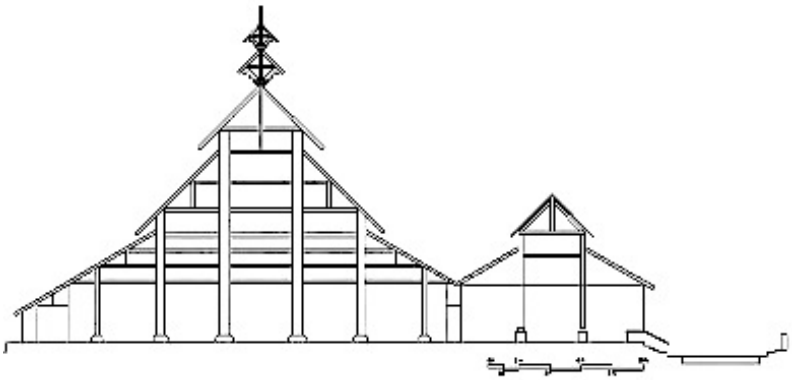
The adaptation of a *serambi* into a mosque scheme, apart from being a solution for additional prayer space during seasonal occasions, also satisfies the demand for accommodation of social activities. The multi-function nature of the *serambi* is evident in several of the mosques surveyed. In Surakarta, for example, every year the *serambi* of the mosque is used by participants of the *gerebeg,* which involves processions from the villages to the mosque, ending with public feasts at the *serambi* (Lombard, 2000a). Muhaimin (1995, p. 181), in his study of cultural traditions in Cirebon, observed how the *Pendopo Soka* in the tomb mosque of Sunan Gunung Jati in Central Java (which was originally used as an assembly hall) has now become a resting room for pilgrims performing the *ziyarah.* Public judgements were also traditionally carried out by the *qadhi* in the *serambi* (Sartono et al., 1977).

In the *Masjid Agungs*, such as Masjid Agung Demak, Masjid Agung Banten and Masjid Agung Cirebon Kasepuhan, bigger areas are needed to house public-related activities. In these mosques, the provision of several large *serambis* in front and to the sides of the mosques is essential in order for the main prayer halls not to be affected when social activities take place. As the *pendopo* or *serambi* concept is familiar to the Muslim people, both in their form and functions, the introduction of these spaces as an extension to the mosque was an intelligent and sophisticated design decision.

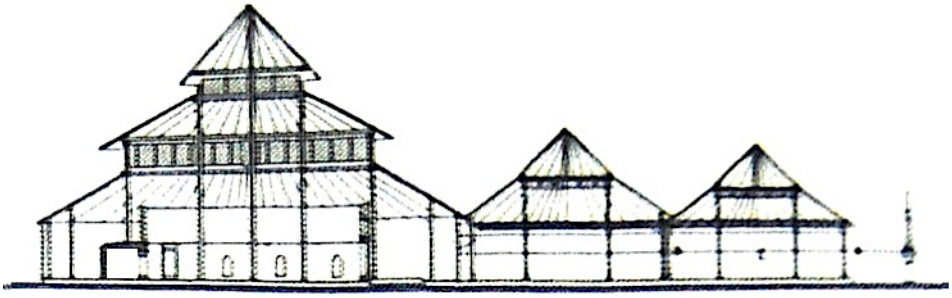
Another unique attribute of the *tajug* model is its ability to accommodate expansion without violating the building's overall proportion or distribution of mass. Its roof height offers sufficient allowance for the mosque to be extended at the perimeter by covering the surrounding veranda with a roof layer below the original roof edges. Even with the addition of the *serambi* to the front (and sides) of the main hall, the *serambi*'s scale and architecture complement the original building and enhance its architectural quality. The expansion system produced low scale and human-friendly structures. Visually it provided additional character to the mosque without rivalling the most essential and central functions, represented by the tiered roofs (Figure 6-21).



(A) MASJID AGUNG SURAKARTA



(B) MASJID AGUNG BANTEN



(C) MASJID AGUNG CIREBON KASEPUHAN

SOURCE: (MASJID 2000)

Figure 6-21 *Tajug* mosque expansions –showing roof profiles.

6.2.4.2 The Demarcation of Zones and Rule for Segregation

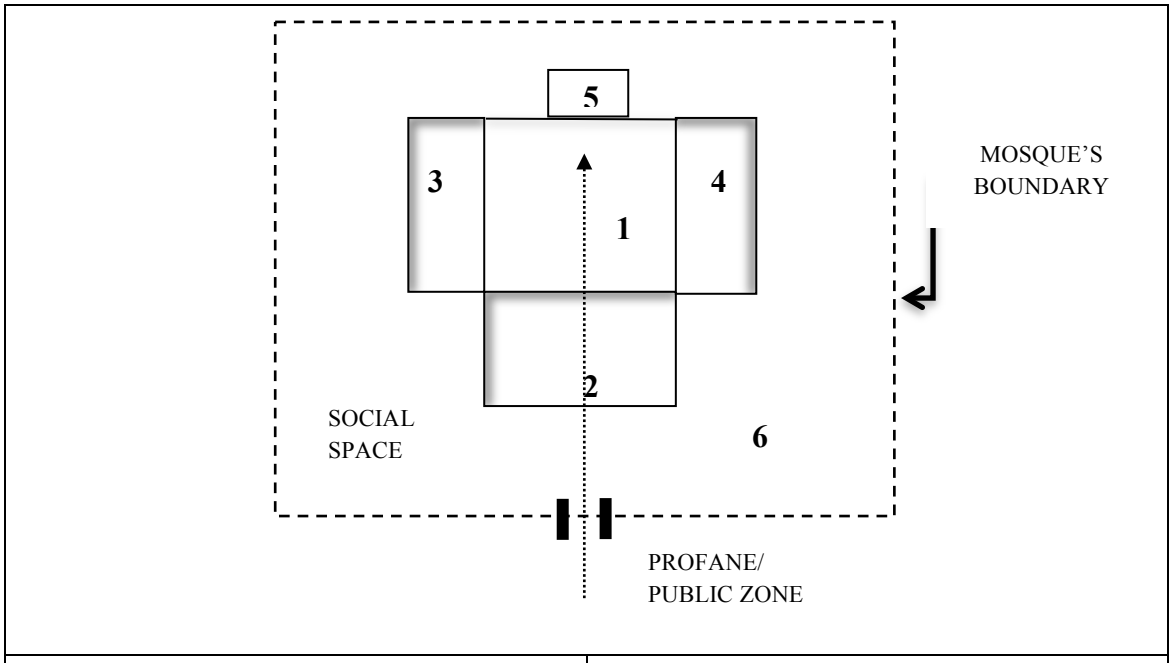
The incorporation of additional structures to the core of the mosque essentially facilitates the definition of various zones existing within the mosque's complex. From afar, the pyramidal multi-tiered roofs of the main prayer hall serve as a marker for the mosque. As one progresses from the public-profane zone towards the prayer hall, he passes through several layers of spatial hierarchy determined by liturgical requirements associated with the mosque's sanctity. The boundary of the *haram* (sacred zone) of the mosque is marked by the fence and the gateways, which provide access to the mosque's compound. The moment one enters the mosque's compound, he is to abide by the rules relevant in protecting the sanctity of the mosque. The open space surrounding the mosque essentially acts as a buffer zone between the profane and the sacred zones (see Figure 6-22).

As one progresses towards the main hall, the various zones are defined architecturally. The mosque's compound is an open space, while the *serambi* is a half-open enclosure. In contrast, the main prayer hall is an enclosed space marked by walls on all of its sides. Entry to the main prayer hall is provided via doors, often in odd numbers between one and seven (Figures 6-23 and 6-24). The interior is often well-lit. The pyramidal form of the roof accentuates the verticality and centrality of the space.

Figure 6-22 Five small doors serving as entrances for Masjid Mantingan, Jepara.

Figure 6-23 Five small doors of Masjid Agung Banten.

The collective prayers' conventions identify the row closest to the *qibla* wall as being the most meritorious for congregations made of men, while for female participants the row furthest from the *qibla* wall is preferred. The prayer rows, which are arranged parallel to the *qibla*, emphasise horizontal linearity as opposed to verticality. The *mihrab*, which marks the *qibla*, further accentuates the shift from the vertical axis towards the horizontal axis, which ends at *Ka'aba*, the symbol of global Muslim unity.



LEGEND		SPACE DEMARCATION
Main Prayer Hall	**1**	**Sacred**
Main *Serambi*	**2**	**Semi-Sacred**
Minor *Serambi*	**3**	**Semi-Sacred**
Minor *Serambi*	**4**	**Semi-Sacred**
Mihrab	**5**	**Sacred**
Mosque's Compound	**6**	**Social Space**

Figure 6-24 Demarcation of Sacred-Profane Zones.

The dramatic effect produced by the roof's apex and its effect on the floor central area resulted in an awareness of the existence of semantic relations between the *tajug*'s expression of form and its rationale of construction. In ancient Javanese tradition, the centre of the square floor plan denotes the most sacred area, as it is directly connected to the roof's apex. In Hindu-Javanese temples, the space underneath the roof apex was also dedicated for statues of deities, or to burn incense in commemoration of deceased individuals. In traditional Javanese houses, the centre (or the *dalem,* in this

pre-Islamic tradition) was the most sacred space in the pyramidal structure. Such a notion, however, is not translated in the mosque idiom.

In terms of space hierarchy, the centre was traditionally allocated to those with high status. Consequently, the low roof heights at the perimeter correspond to lower rankings in society. The hierarchical significance was reflected in the legends pertaining to the construction of Masjid Agung Demak, whereby the *soko guru* were constructed by the revered *wali* and the perimetral columns were erected by their students, with the claddings and finishing jobs completed by laymen (R. Santoso, 2000).

In contrast, Islamic liturgy defines spatial hierarchy based on the merits of the action. Thus, the perimeter space nearer to the *qibla* wall is considered the highest in status. The centre space (in the Prophet's Mosque prototype, the courtyard) was a neutral zone that acted as a buffer between the most meritorious space near the *qibla* wall and the social space at the opposite end. Based on this model, the centre in the *tajug* model is rendered unimportant. In addition, with the shift of axis from vertical (centre space to the apex) to horizontal (*qibla* axis), the ancient hierarchical arrangement is effectively obliterated.

The focus towards the centre is further weakened by introducing openings to the side walls of the prayer hall, in contrast to pre-Islamic pyramidal structures, which were purposely made without openings. Functionally, the openings assist in reducing the physical barriers between the mosque attendants, as, during peak seasons, the side *serambi* or *emper* are expected to be used to accommodate the increased length of the *saf* (prayer rows). In many of the mosques surveyed, the *serambi*s are also converted to become female prayer areas. As women sometimes come to the mosque with children, the *serambi* acts as an ideal prayer space, as it is, in one aspect, detached from the main prayer area (which is allocated for men), thereby satisfying the segregation required between male and female members of the congregation. In another aspect, the *serambi* is a semi-sacred zone and a transition space between the sacred zone and the social or public zone located in the mosque's compound. As children are expected to utilise the open space as a playground, converting the *serambi* into female prayer area is an efficient solution to the design prolem.

6.2.5 Mosques with Minarets

The minaret is a tower-like structure that was developed out of the need to summon people to prayer through the proclamations of the *adhan.* In the context of Island Southeast Asia, however, the traditional method of summoning people to gather was by striking the *beduk* (wooden drum), which sometimes came in the form of a *kentong* (hanging log). For this reason, the function of the *beduk* was naturally absorbed into the mosques' elements. In the early mosques, the minaret was found to be unnecessary.

Minarets were only introduced as part of the mosques after the 18th century. Even in mosques where minarets were later added, they did not replace the functions of the *beduk*, as the *beduk* summons people to come to the mosque, while the *adhan* proclaimed at the minaret announces the time of prayer.

However, as early as the 15th and 16th centuries, two mosques were identified to have incorporated minarets into their designs. The first was the minaret of Masjid Menara Kudus. G. F. Pijper was of the opinion that this well celebrated minaret was in fact a pre-existing Hindu gateway (Pijper, 1974). Its form is unmistakably a direct adoption of the *kulkul* (tower bell), which can be seen in Bali. However, innovation is introduced in this structure, with the bell replaced by a huge drum *(beduk),* which is beaten as a sign that the prayer time is approaching (Figure 6-25).

(A)

(B)

(A) THE MINARET OF MASJID MENARA KUDUS; (B) THE BIG DRUM (*BEDUK*) LOCATED AT THE TOP PART OF THE MINARET IN MASJID MENARA KUDUS.

Figure 6-25 The drum of Masjid Menara Kudus:

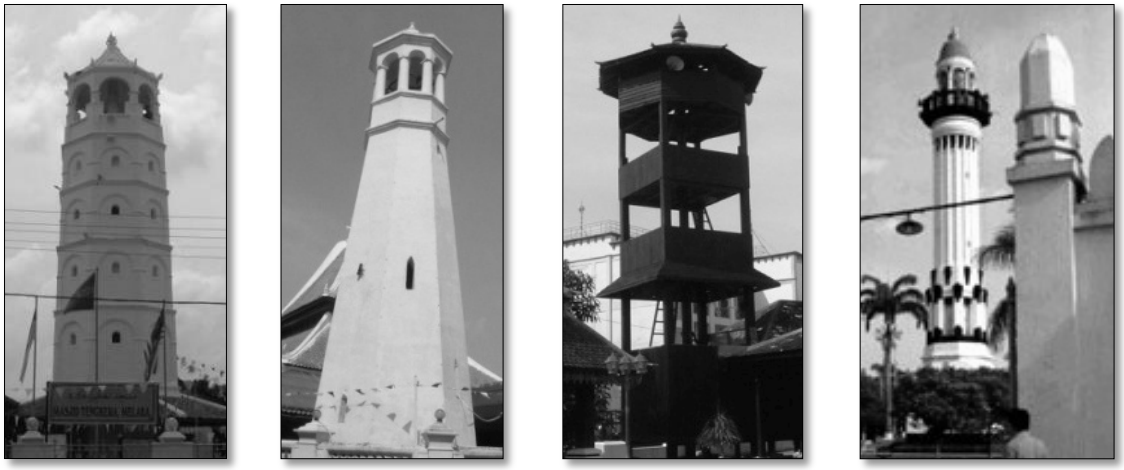
The other minaret is the minaret of Masjid Agung Banten (Figure 6-26). It stands 30 meters high, with an octagonal plan approximately 10 meters in diameter, which reduces as it gets higher. The entry to the minaret is placed at its base, in the form of a stylised winged entryway with top arch and upward curled ends. Rectangular based pilasters extrude from the surface of the entryway looking like funnelled classical columns. The body of the minaret is left empty, without any meaningful physical treatments except for the presence of diamond shaped vent holes in diagonal lines. A massive *stupa*-like structure tops the minaret, where the form is horizontally broken by the introduction of an external veranda that was provided for aerial viewing. The minaret can be mistaken as a lighthouse due to its design and scale

Figure 6-26 The minaret of Masjid Agung Banten.

All of the other minarets were introduced to the mosques' schemes after the 18th century. The minarets of Masjid Sunan Ampel (15th century), Masjid Al Mansur (18th century), Masjid Al-Makmur Cikini (18th century) and Masjid Batak Rabit (20th century) were all built in cement-rendered bricks with a round base (Figure 6-27). Masjid Tengkera (18th century), Masjid Kampung Hulu (18th century), Masjid Kampung Laut (18th century) and Masjid Agung Surakarta (19th century) have octagonal base minarets (Figure 6-28). They are all detached structures that are placed a distance away from the main building. The minaret of Masjid Kampung Laut is an exception, however. It is connected to the main building via a platform extended from the mosque's *serambi* floor to the base of the minaret.

MASJID SUNAN AMPEL | MASJID AL-MANSUR | MASJID AL-MAKMUR CIKINI | MASJID BATAK RABIT

Figure 6-27 Mosques with round-based minarets.



MASJID TENGKERA | MASJID KAMPUNG HULU | MASJID KAMPUNG LAUT | MASJID AGUNG SURAKARTA

Figure 6-28 Mosques with octagonal-based minarets.

The minaret of Masjid Tengkera resembles the pagoda in its design. The minaret of Masjid Agung Surakarta sits on a square base pedestal. The minaret itself has a round diameter on an octagonal base. The body of the minaret has a fillet and fluted profile. The top structure has arches on column openings with red cupola finish (Figure 6-28).

The minarets of Masjid Agung Demak (15th century), Masjid Kampung Keling (18th century) and Masjid Paloh (20th century) are of square base (Figure 6-29). Similar to Masjid Tengkera, the minaret of Masjid Kampung Keling also resembles the pagoda. The minaret of Masjid Agung Demak, which is made of steel, was introduced to the mosque in 1932 in a completely different language from the architecture of the old mosque. It is a 22 meter high exposed steel structure, with diagonal struts strengthening the body frame and a wide platform breaking its height in the middle. The body supports a rectangular base top structure with small windows on the sides of its walls. The top of the minaret is adorned with a pointed steel dome. According to the remarks made by the mosque's management (as written on a plaque regarding the history of the minaret), it was built *'untuk memenuhi tuntutan modernisasi era abad XX*' (to satisfy the demand of modernisation in the 20th century).

MASJID AGUNG DEMAK MASJID KAMPUNG KELING MASJID PALOH

Figure 6-29 Mosques with square-based minarets.

Aside from the aforementioned mosques, the other mosques of the *tajug* prototype do not have minarets. With the introduction of loudspeakers, *adhan* can now be proclaimed without the need for tall structures. Some of these mosques still maintain the *beduk* as the main method of calling people. In mosques such as Masjid Sendang Duwur, Masjid Mantingan, Masjid Agung Cirebon Kasepuhan and Masjid Kampung Baru, the *beduks* are placed at the *serambi* areas (Figure 6-30).

MASJID SENDANG DUWUR

MASJID MANTINGAN

MASJID AGUNG BANTEN

MASJID KAMPUNG BARU

MASJID AGUNG SURAKARTA

MASJID BATAK RABIT

Figure 6-30 *Beduk* and/or *kentong* placed at *serambi* in various mosques.

In Masjid Sunan Giri and Masjid Sultan Ternate, the *beduks* are placed in a detached structure called the *beduk* house. In the case of Masjid Sultan Ternate (as well as a few Melakan mosques such as Masjid Kampung Hulu), the *beduk* house also functions like a guardhouse, as it is placed at the main gateway of the mosque (Figure 6-31).

MASJID SUNAN GIRI MASJID KAMPUNG HULU MASJID SULTAN TERNATE

Figure 6-31 *Beduk* house.

In Masjid Pusaka and Masjid Pondok Tingi, a structure is built in the space underneath the top roof level, with stairs leading towards the platform where the *adhan* is proclaimed. Similar arrangements may have taken place previously in Masjid Al-Mansur and Masjid Al-Makmur Cikini, where platforms are built just underneath the upper roof space with ladders leading towards the top (Figure 6-32).

MASJID PUSAKA MASJID AGUNG PONDOK TINGGI MASJID AL-MANSUR

Figure 6-32 Platforms placed underneath roof tops for the muezzin.

In general, the functions of a minaret and the act of summoning people to prayer are achieved in the *tajug* mosque prototype in one of the following methods: the usage of *beduk*, either placed in the tower (such as in Masjid Menara Kudus, in the *serambi*, or in a *beduk* house); the appropriation of under-roof space by means of a platform built with ladders, as found in Masjid Pusaka, Masjid Pondok Tinggi and probably Masjid Al-Mansur and Masjid Al-Makmur Cikini; and the introduction of minarets in the form of detached structures set apart from the main buildings.

6.2.6 Mosque Elements: *Mimbar* and *Mihrab*

Muslims of Island Southeast Asia saw the *mimbar* as representing authority and power, as evident in its architectural treatments. It exhibited beautiful motifs, which in many cases had symbolic meanings pertaining to kingship and power. The earliest form of *mimbar* took after the *padmasana*, the design and concept of which was inherited from the Majapahit court. *Mimbars* in Masjid Pulau Penyengat and Masjid Sultan Abu Bakar were placed in the middle of the *mihrab* space, in contradiction to the *Sunnah*, which allocated the right of the *mihrab* as the space for the *mimbar*. There is no other admissible explanation for such a deliberate move except as a gesture of control and absolute authority.

If the symbolism of the *mimbar* was clear, the position of the *mihrab* and the *qibla* wall was more ambiguous. In mainland Islamic countries, the *mihrab* symbolises the apex of Muslim unity, bonded by prayer facing the *Ka'aba* (Mu'nis, 1981, p. 75). For this reason, the *mihrab* and the *qibla* wall served as the feature walls and were both elaborately decorated. Despite the fact that the concave *mihrab* was not present in the time of the Prophet (S), it morphed into an important symbolic element in the time of the 'Umayyad.

Many scholars – including Sauvaget (2002), Miles (1949) and Grabar (1973) – believe that the *mihrab* had a liturgical and symbolic function. However, as Sauvaget pointed out, as an indicator of *qibla* this small niche was only visible at a certain angle and distance (Sauvaget, 2002, p. 27). In reality, the *qibla* wall served as a better reference point in providing the correct orientation towards *Ka'aba*. The *mihrab*'s symbolic and political role was enhanced during the 'Umayyad's caliphate, when it served as the main motif in the *dirham* (silver coins) of the 'Umayyads, and various decorative elements found in mosques and personal belongings of the Umayyad's caliphs (Miles, 1949, pp. 152–164). The décor in the *qibla* wall of the Umayyad's mosque, including its 'gleaming' *mihrab*, indicated that it was a place intended for the leader (Sauvaget, 2002, p. 30). This practice was widespread in the Muslim world during a time when the mosque served as a ceremonial focal point of political leadership (Miles, 1949, p. 159).

There is nothing to suggest that the Muslims in Island Southeast Asia placed the same symbolic significance on these elements. The *mimbars* and *qibla* walls found were

generally plain and uninteresting. In addition, it is highly possible that, due to the absence of parallels in the symbolism intended by a niche (the *mihrab*) located on a plane (the *qibla* wall), the *mihrab* and *qibla* wall lacked the prominence deserved. In the tradition and cultural heritage of the people of Island Southeast Asia, prominence was signified by heights, apex or verticality. The vertical axis found in the centre of the *tajug* mosques essentially had to compete with the horizontal axis of the *qibla* and the *mihrab*. The mosque arrangement required that the focus towards the apex (i.e., the infinite point directed towards the gods in the heavens) was shifted towards a point on earth, which is the *Ka'aba*. Similarly, the prominence of the centre, which represented ancient society's hierarchical structure, was modulated by the *mihrab* being placed at the perimeter wall facing the *qibla.*

From an architectural perspective, the *mihrab* and *qibla* wall in vernacular mosques were also subject to demolition in the event of expansion. As the walls of vernacular mosques were non-loadbearing and often made from perishable materials, they were usually removed and replaced. With the exceptions of the *mihrab* in Masjid Agung Cirebon and Masjid Merah Cirebon, which were made of stone, we are left with basically no evidence of the physical characteristics of other *maharib* of the same age.

6.2.7 Popular Application of Type

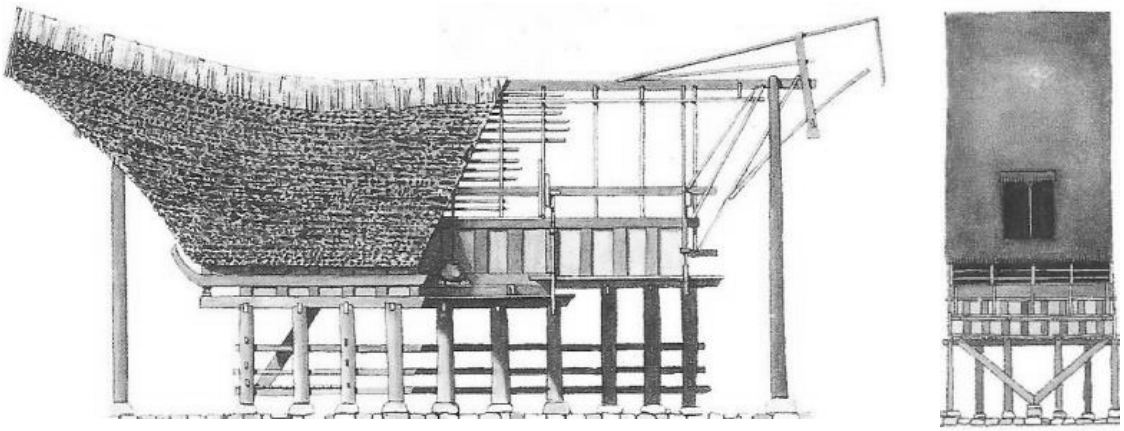
The *tajug* prototype mosques are mainly found in the pre-19th and 20th century period, with the style dominating the 15th and 16th century mosque typologies. Their application is widespread across the region, regardless of main functions served. In the 15th and 16th century period, many of the mosques became tomb mosques, apart from their main functions as Sultanate and community mosques. In the 16th and 17th century period, the *tajug* style emerged outside of Java in the oldest mosques of the Malay Peninsula, such as Masjid Kampung Laut, Masjid Kampung Hulu, Masjid Kampung Keling and Masjid Tengkera. As the name '*kampung*' (village) suggests, these mosques are village mosques (i.e., community mosques). Masjid Tengkera, however, served as the principal mosque of Melaka before the Masjid Al-Adzim Melaka was built (Abdul Halim, 2004, p. 72). During this period, this typology was mainly found in community mosques, as not many sultanate mosques were being built (with the exception of Masjid Sultan Ternate).

In the 19th and 20th centuries, the popularity of *tajug* application decreased dramatically with the usage of new building materials and technology that enabled new forms to be introduced to the mosque's idiom. Most of the mosques using *tajug* style during this period were largely affected by the introduction of modern building technologies, to the extent that many existing mosques incorporated new and foreign elements to the original forms. Mosques found outside of Java Island, such as Masjid Pusaka and Masjid Pondok Tinggi, retained many original features of the *tajug* prototype (in contrast to the *tajug* forms found in Masjid Al-Makmur Cikini, Masjid Agung Surakarta, Masjid Paloh and Masjid Batak Rabit, which used modern building materials for the bodies of the mosques, leaving only the roof structures authentic).

6.3 Design Features of Long-Roof House Prototype

The domestic architecture of Island Southeast Asia is characterized by a pitched roof supported by timber posts forming the main structural components. This structural configuration generates a unique archetypal form consisting of a rectangular structure raised on main wooden posts with extended lines of roof forms often culturally identifiable to the various ethnic groups of the region.

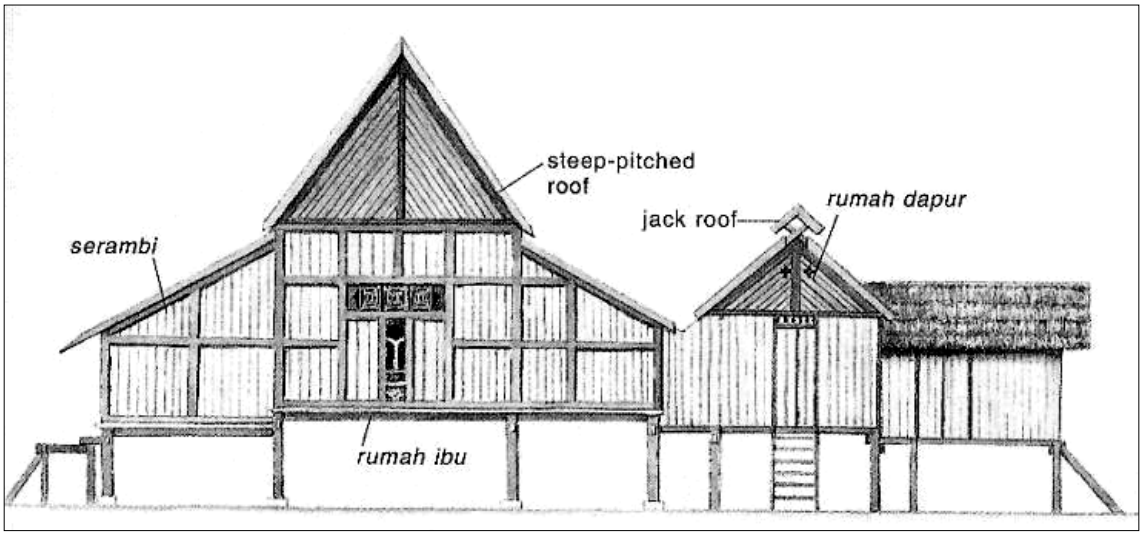
The constructional system employed sophisticated jointing techniques demonstrated in the absence of nails and the presence of intelligent methods of distributing dead loads of the building, leaving the walls to be non-loadbearing. Variations are witnessed between regions that are prone to seismic activities –such as *Toraja* and *Nias* (Figure 6-33) – and non-volcanic regions such as the Malay Peninsula. Specifically, massive columns and equally massive diagonal struts are used as stabilizers in the first, while the architecture of the latter is distinguished by its slim and skeletal framing members (Figure 6-34).



(A) (B)

EDITED FROM (DAVISON, 1999: 8–9).

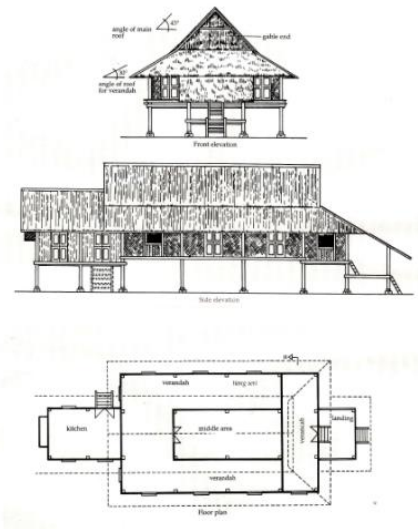
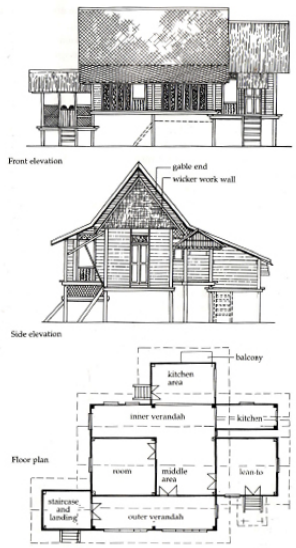
Figure 6-33 (a): Traditional house of Toraja; (b) Traditional house of Nias.



EDITED FROM (QUIRK, 1998: 27)

Figure 6-34 Traditional house in Pahang, Malay Peninsula.

The traditional house archetype adopted for the mosque design is mainly found in the long-roof construction (*bumbung panjang*). The origin of this type can be found in the Malay long-roof house typologies, which are distinguished by regional variations (Figure 6-35).

The Long-Roof Malay House	
	
The Long-Roof House in Kedah	The Long-Roof House in Penang

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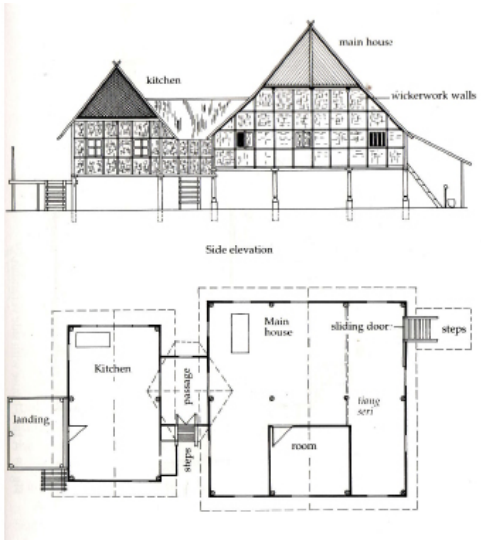
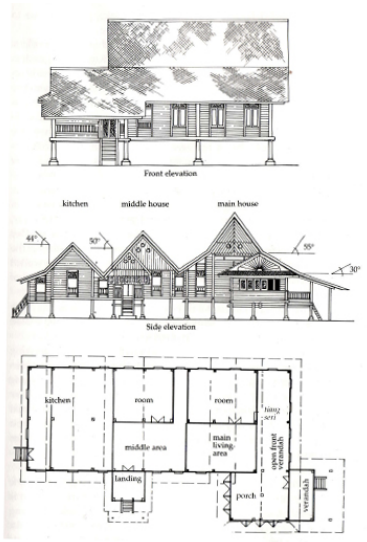
<tr><td> 
</td><td> 
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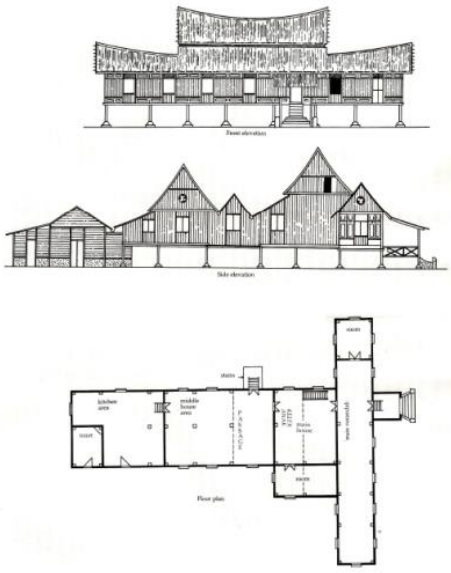
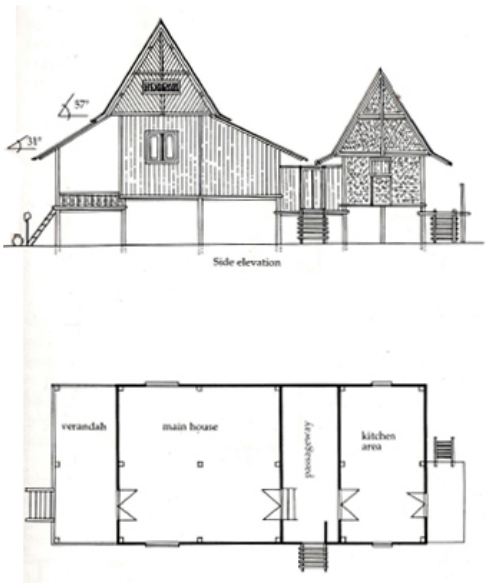
<tr><td>The Long-Roof House in Perak</td><td>The Long-Roof House in Selangor</td></tr>
<tr><td>  </td><td> 
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<tr><td>The Long-Roof House in Negeri Sembilan</td><td>The Long-Roof House in Melaka</td></tr>
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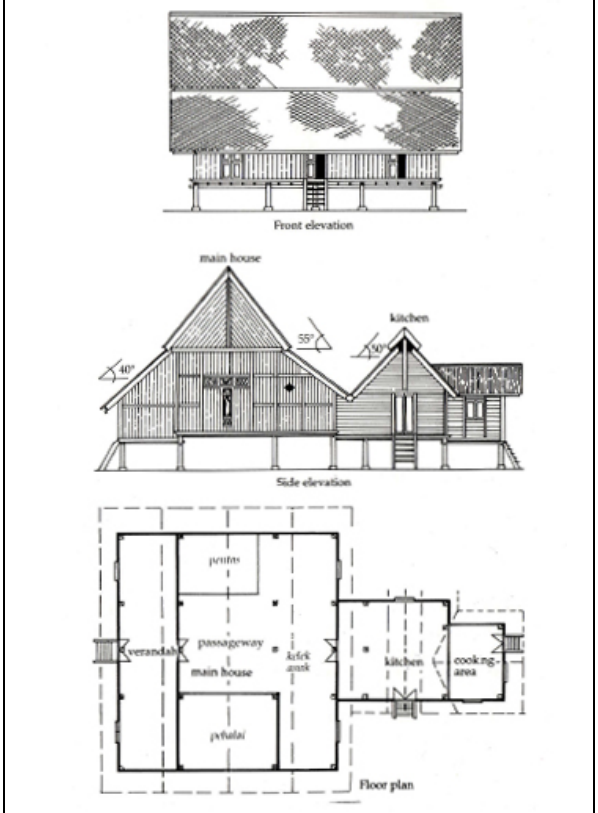
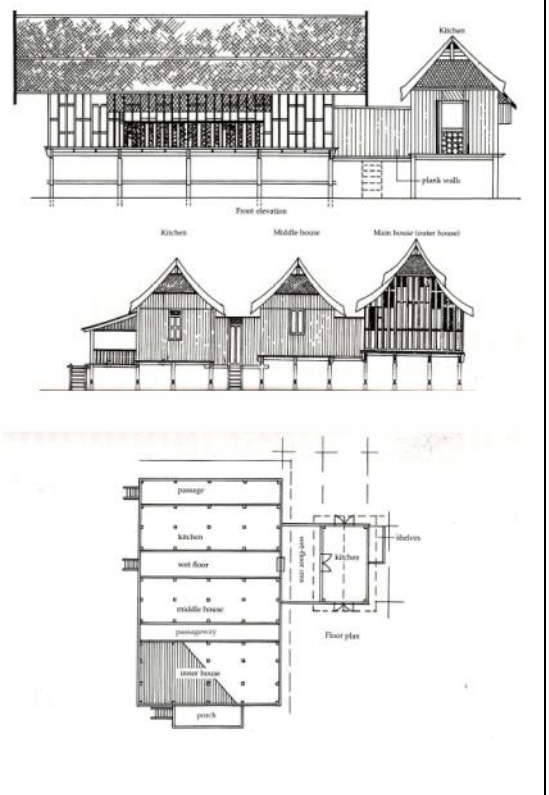
The Long-Roof Malay House



The Long-Roof House in Pahang



The Twelve-Pillared House in Kelantan and Terengganu

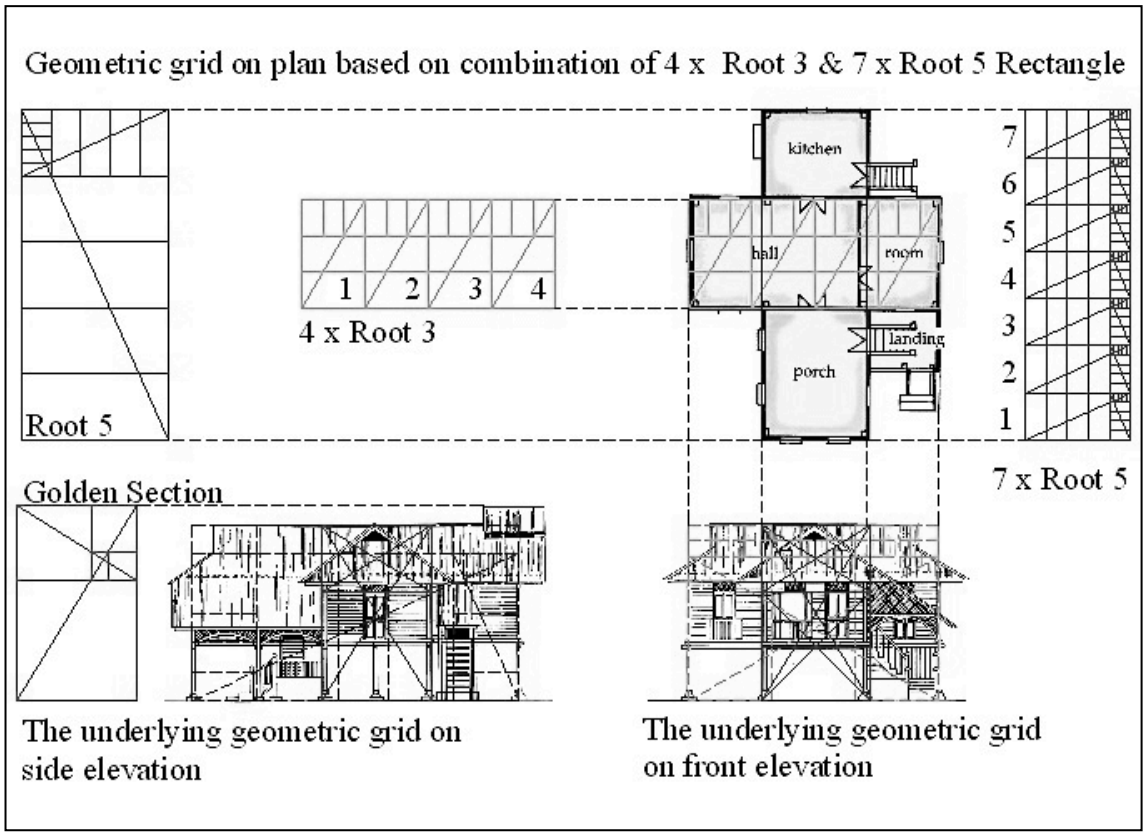
EDITED FROM (ABDUL HALIM, 1996).

Figure 6-35 Long-Roof Malay house.

The structural configuration of the long-roof house is represented by a series of 'A' shaped timber frames forming the skeleton of the building in the form of equal-spaced bays. Using post and beam construction, the posts and roof frames form the loadbearing structural elements, leaving the walls to be non-loadbearing. The weight of the roof is spread through the frames towards the wall plate level down to the posts or columns' pedestals on the ground. It is a lightweight structure, with the posts sitting on stone pedestals placed on the ground, and with elevated floor levels. The walls are usually made of wooden panels, built according to the frame sizes. They usually consist of decorative woodcarving panels that are placed on various heights on the wall plane according to intended functions.

Pile foundations and wooden posts have several advantages in the tropical climate of the Malay World. The pitched roofs cater to the heavy rainfalls during the

monsoon seasons, while the raised floor provides an excellent under-floor ventilation system. In traditional houses, the under-floor space is also used as a storage space and as a pen for domestic animals (Davison 1999, p. 12). The raised floors protect the building from mud and flood waters – although Lee (2003) proposes that the configuration has more to do with aesthetic considerations than mere pragmatic solutions to environmental requirements. Hazman Hazumi (2009), in his doctoral studies, finds that the Malay house is governed by an intricate geometric proportioning system that produces its unique aesthetic qualities (Figure 6-36).

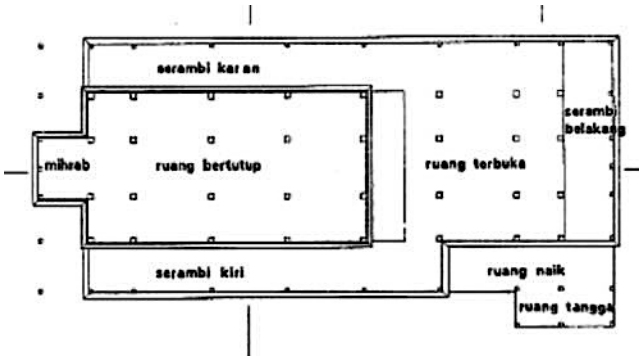


SOURCE: (HAZMAN HAZUMI, 2009).

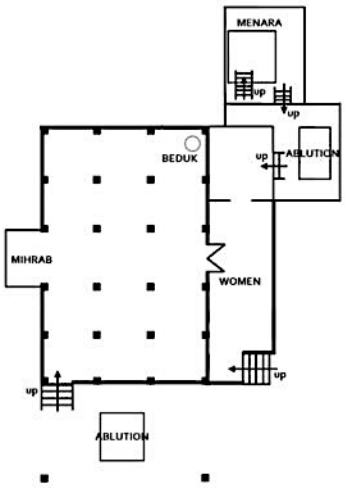
Figure 6-36 Study on the underlying proportioning system of the Malay house.

It is important to note, however, that there are few mosques built in the domestic house archetype. The examples found in this study are the wooden mosques of Masjid Telok Manok Patani (18th century), Surau Tok Janggut Kedah (20th century) and Masjid Langgar Kelantan (20th century) (Figure 6-37)[105]. The long-roof mosque prototype in general demonstrates several unique characteristics. It is a detached building with ample open spaces surrounding the building and is found located in a village, amongst the people's settlements. It has a rectangular floor plan, often with the long side parallel to the *qibla* axis. In Surau Tok Janggut, however, the *mihrab* is placed on the longer wall with the roof ridge aligned north to south. The main entrance of the mosque is usually provided via a staircase leading to the *anjung* (porch) or *serambi* (veranda) at the eastern façade opposite the *qibla* wall, similar to traditional house spatial arrangement. However, sometimes there can be more than one entry point to the prayer hall, as seen in Masjid Teluk Manok, where additional entrances are found to the sides of the prayer hall (i.e., in the southern and northern walls).

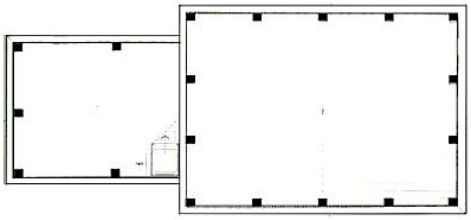
[105] For detailed visual characteristics of each of these mosques, please refer to Chapter 4, under individual mosque heading.



Masjid Langgar



Surau Tok Janggut

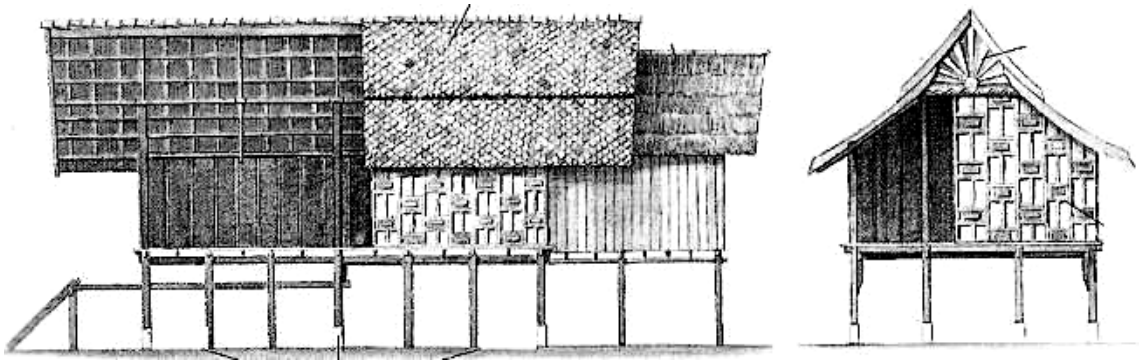


Masjid Teluk Manok

Figure 6-37 Floor plans of the long-roof mosque prototypes.

6.3.1 Constructional Techniques

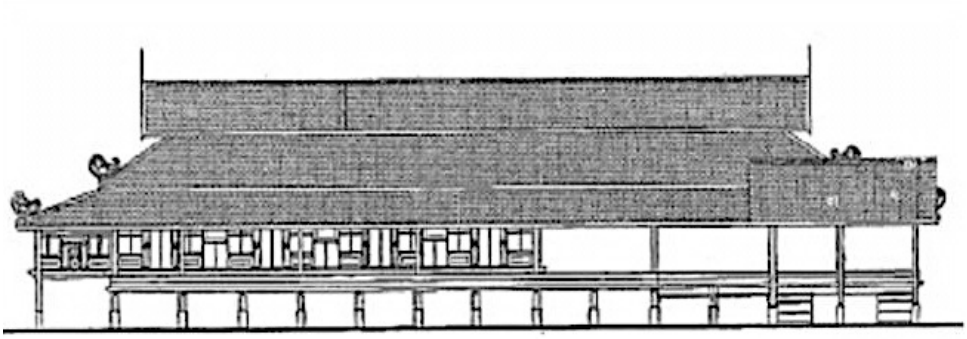
The structural configuration of the long-roof prototype produces linear arrangements of columns and an elongated façade parallel to the roof ridge. The size of its structure is determined by the number of 'A' frame bays represented in the number of pillars employed (Figure 6-38). Smaller houses are known as *rumah bujang* (bachelor houses) or *rumah tiang enam* (houses with six pillars). The larger houses have more pillars (*tiang*) and usually come in the form of *rumah tiang duabelas* (houses with 12 pillars) (Quirk, 1998, p. 26). Characteristic of vernacular architecture, the long-roof prototype employs unique jointing systems without the use of nails.



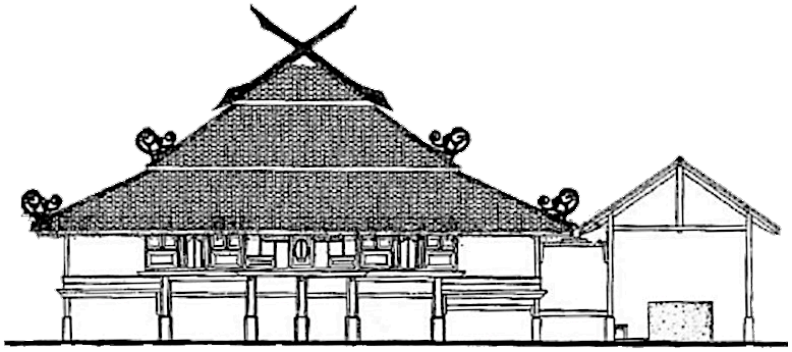
EDITED FROM (QUIRK, 1998: 27).

Figure 6-38 Long-roof house type with 12 pillars – section and elevations.

The structural strength of the building is provided by the series of bays arranged at equal distances in linear directions, thereby producing principal pillars that are rather slim. This type of configuration essentially limits the roof height that can be achieved, and consequently the extent of expansion possible for the floor area. Typically, additional floor space area can be acquired by extending the roof line surrounding the main floor space. However, as the roof height is low, extension of the space requires the floor level of the new covered area to be lower than the original floor. In addition, the edge of the new roof covering this area must be placed below the roof line of the original structure. This arrangement in itself limits the type of extensions that can be carried out.



(a) Masjid Langgar – south elevation



(b) Masjid Langgar – west elevation

SOURCE: KALAM.

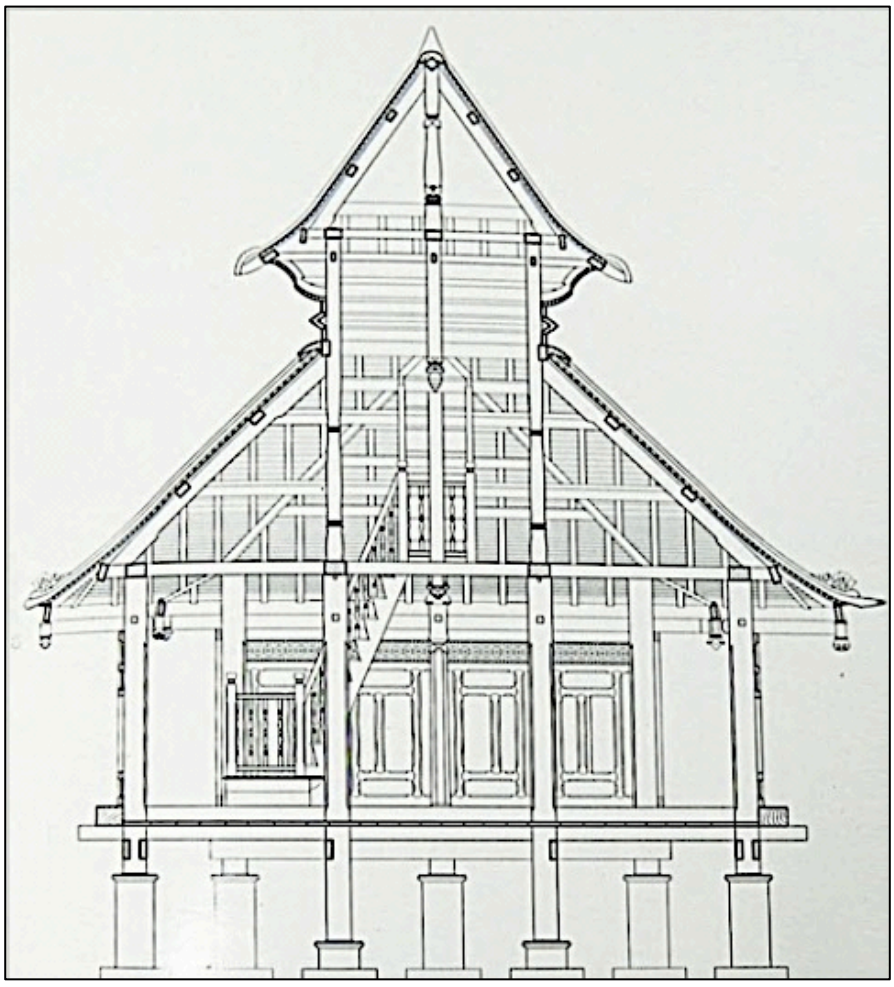
Figure 6-39 Masjid Langgar elevations – showing *serambi* to the sides of the main hall.

Expansion to the sides of the main hall will only allow for a limited amount of space, which, in any case, is insufficient to provide additional space for prayer rows. This is seen in the Masjid Langgar Kelantan, where *serambi* were added to the sides of the main hall (Figure 6-39). The floor level of the *serambi* is made lower than the main hall, with an additional roof layer added on the perimeter, thereby producing a multi-layered roof profile. Expansion in the direction perpendicular to the elongated façade, although theoretically possible by introducing a cross gable roof structure, can only be done to acquire a small amount of space due to the presence of the perimetral columns, which provide rigidity for the whole structure. In Surau Tok Janggut, for example, the *mihrab* was created by extending the floor in the direction of the *qibla* axis to the width of one bay only. Even with a small extension, a new cross roof was introduced to cover the space.

A typical extension plan is in the form of an additional *serambi* at the eastern façade, which allows greater floor area to be acquired. This is seen implemented in both Masjid Teluk Manok and Surau Tok Janggut. In Masjid Teluk Manok, for example, the

new roof took the form of a long-roof with gable ends, to allow for the lower angle of the gable to meet the wall of the old structure at a level lower than the edge of the original roof. In essence, the expansion of the long-roof house typology is limited by the roof heights and the arrangement of the skeletal frame members.

The incorporation of minarets in the long-roof house model exhibits ingenuity in its adoption of the functional space. In Masjid Teluk Manok, the minaret is in the form of a protruding structure extended from the rooftop to create a small tower. From the *mihrab* space, a staircase leads to a platform built under the roof space within a structure that supports a projected pyramidal roof form (Figure 6-40).



SOURCE: KALAM

Figure 6-40 Masjid Telok Manok: Structure of *qibla* wall and minaret.

In Surau Tok Janggut, the minaret is a free-standing structure, built very close to the main building. The cross roof projected from the main building to form a roof covering one-third of the minaret's body gives the appearance that the minaret is an integrated part of the mosque's building (Figure 6-41). The minaret structure can be divided into three parts: the base, the middle and the top. The base is in the form of structural posts supporting a square-shaped platform, reachable through the wooden stairs. The middle part is in the form of a square plan structure with horizontal wood panelling covering its body. At the top, the minaret forms an octagonal floor plan that incorporates window-like openings surrounding its walls. The top of the minaret is covered with metal roofing in octagonal shape, topped with a copula and ornamented with a crescent and star finial.

(A) MASJID TELUK MANOK (B) SURAU TOK LANGGAR

Figure 6-41 Minaret treatments in Masjid Teluk Manok and Surau Tok Langgar.

6.3.2 Mosque's Spatial Planning

The requirement for an open plan with minimum physical interruption is adequately met by the long-roof mosque typology. An exemplary model is seen in Masjid Teluk Manok, where the structural pillars are located at the perimeter, thereby leaving the central space free of columns (see Figure 6-37). As the shorter wall is aligned parallel to the *qibla* wall, the mosque is able to accommodate more *saf* while being limited to the number of persons in each *saf*. The *saf* can be arranged efficiently without being broken following the grids formed by the pillars.

However, in the event that additional floor space is required, the structural configuration of the long-roof only permits limited variations in the ways the floor space can be extended, as discussed above. Even with extension being made possible with the introduction of *serambi* at the end of the eastern wall, the distance between the *ma'mum* and the *imam* is increased, thereby affecting the audio and visual quality of the prayer. In addition, as extension requires the floor level to be lower than that of the original, the difference in levels will break the *saf* if the prayer hall is extended to the sides; and if it is extended to the east, it subtly implies a difference in status (higher and lower) of the congregational members.

Such an arrangement is seen in Masjid Langgar Kelantan, which is primarily used as a tomb mosque for dignitaries of the royal family of Kelantan. The central space is raised and bounded by walls on all of its sides while the surrounding *serambi* and the extended space at the eastern end are on a level lower than the central space. During special events, the central space is used for the members of the royal family, while the lowered *serambi* spaces are for the lay people.

In both Masjid Teluk Manok and Surau Tok Janggut, the *serambi* is added as a prayer space for female members of the congregation. Such an arrangement sufficiently resolves the design problems existing in the requirements of *saf* and the need for segregation. In both of these mosques, the entry points for men and women are separated by placing separate stairs for the main prayer hall and the *serambi*.

6.3.3 Popular Application of Type

In contrast to the *tajug* model, which is concentric in nature, the long-roof prototype is linear. In circumstances where strict protocol is not required, the linear arrangement allows the mosque to be approached from all sides (except the *qibla* wall) (Figure 6-42). This arrangement is most suitable for community mosques, which is why it is a popular application in this type of mosque. Similarly, the long-roof prototype allows limited expansion of the prayer space and offers limited possibilities for spaces to be converted according to the multi-varied functions of the mosque. It is therefore more suitable to serving a smaller congregation such as a village.

SOURCE: KALAM.

Figure 6-42 Masjid Teluk Manok: Entry to the prayer hall from the south.

6.4 Colonial (European)-Hybrid and Foreign-Hybrid Mosques

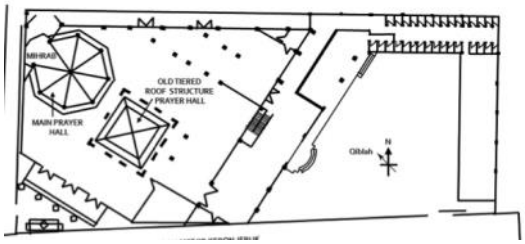
Colonial-hybrid mosques are classified based on their dominant features (as outlined in Chapter 5.3.3), while foreign-influenced mosques are mosques that do not fit any of the other categories. However, in some of these mosques, the mix and match style between old and new is evident – thus the term 'hybrid' to signify that the classification is not always rigid.

Ten mosques are classified as belonging to the colonial-hybrid type: Masjid Kebon Jeruk Jakarta (18th century), Masjid An-Nawier Jakarta (18th century), Masjid Langgar Tinggi, Jakarta (19th century), Masjid Azizi Langkat Sumatera (19th century), Masjid Lebuh Acheh Penang (20th century), Masjid Sultan Abu Bakar Johor (20th century), Masjid Zahir Kedah (20th century), Masjid Ubudiah Perak (20th century), Masjid Kapitan Keling Penang (20th century) and Masjid Panglima Kinta Perak (20th century) (Figure 6-43)[106].

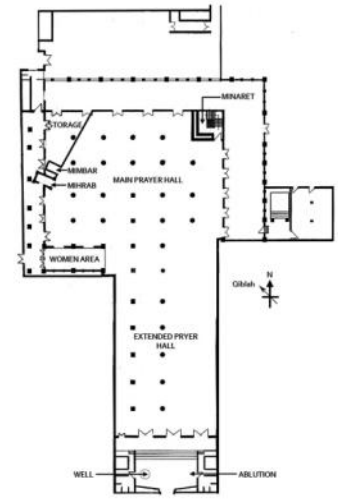
Masjid Kebon Jeruk and Masjid An-Nawier were both originally *tajug* mosques. These mosques underwent extensive upgrading works, resulting in the inclusion of new architectural grammar that was inconsistent with the original design features. Masjid Azizi, Masjid Zahir, Masjid Ubudiah and Masjid Kapitan Keling were mosques that were designed by European architects and engineers.

[106] For detailed visual information about each mosque, including associated floor plans and/or elevations, please refer to headings of individual mosque in Chapter 4 Mosque Catalogue. Mosques grouped into these typologies (i.e., colonial and foreign) are then studied for their physical characteristics through visual comparison of the mosque plans, as demonstrated in Figure 6-43. The objective is to analyse the similarities (or differences) existing within mosques belonging to the same typology based on adopted typological analysis method (Leupen, 1997).

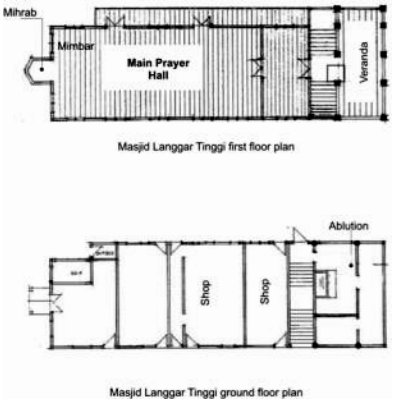
Colonial-Hybrid Mosques Floor Plans



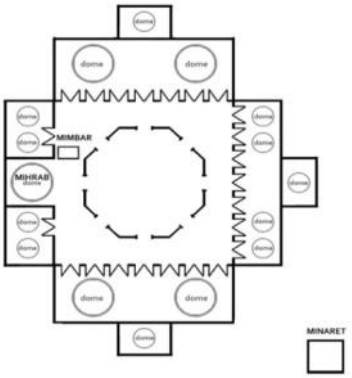
Mosque: Kebon Jeruk, Jakarta (17th–18th Century)
Function: Community Mosque
Building Type: Colonial-Hybrid (Original Vernacular – Chinese)



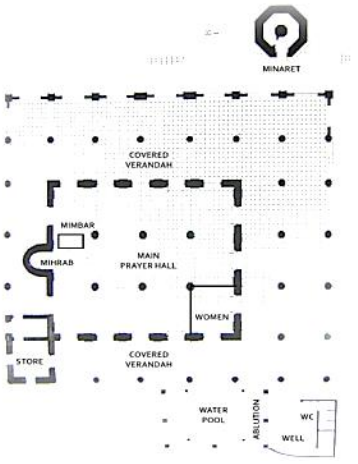
Mosque: An-Nawier, Jakarta (17th–18th Century)
Function: Community Mosque
Building Type: Colonial-Hybrid



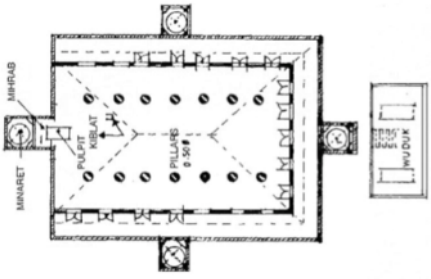
Mosque: Langgar Tinggi, Jakarta (19th–20th Century)
Function: Community Mosque
Building Type: Colonial – Two-Storey Cement-Rendered



Mosque: Azizi, Langkat Sumatera (19th–20th Century)
Function: Sultanate Mosque
Building Type: Colonial-Moorish With One Central Dome & Eight Small Domes



Mosque: Lebuh Acheh Penang (19th–20th Century)
Function: Community Mosque
Building Type: Colonial-Regional?



Mosque: Sultan Abu Bakar, Johor (19th–20th Century)
Function: Sultanate Mosque
Building Type: Colonial-Victorian

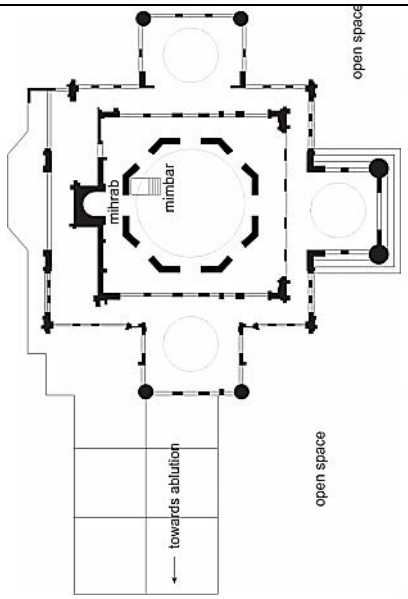
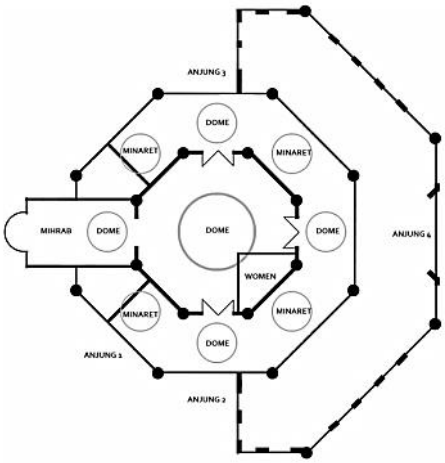
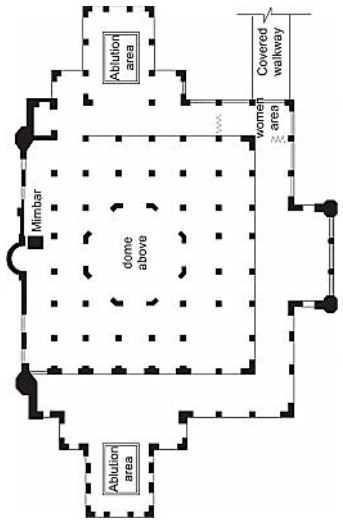
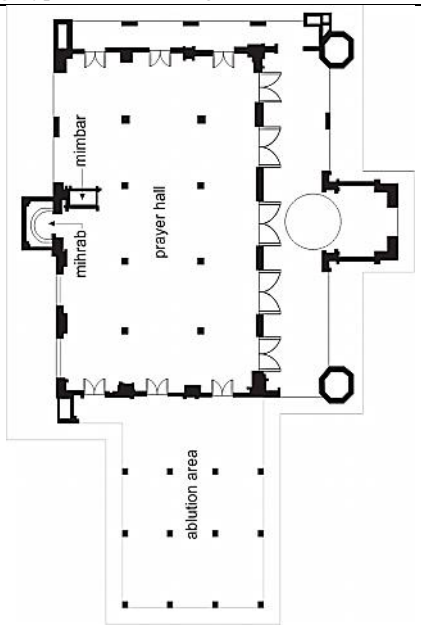
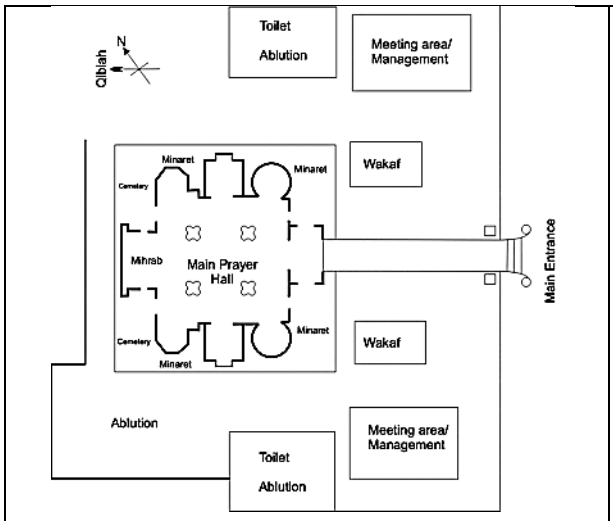
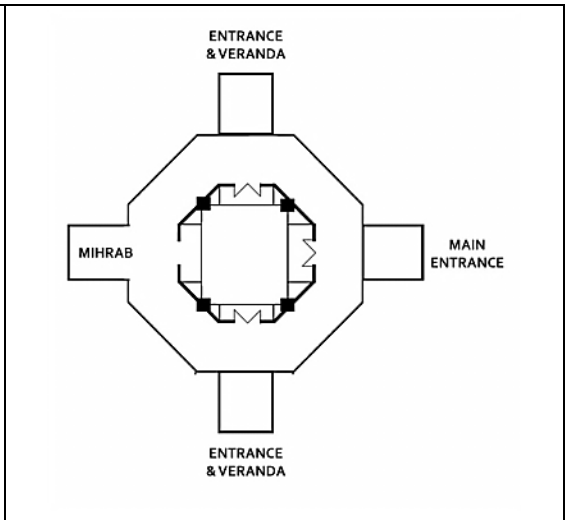
Colonial-Hybrid Mosques Floor Plans	
	
Mosque: Zahir, Kedah (19th–20th Century) Function: State Mosque Building Type: Colonal-Mughal-Moorish	Mosque: Ubudiah, Perak (19th–20th Century) Function: Tomb Mosque Building Type: Colonial-Mughal-Moorish-Church?
	
Mosque: Kapitan Keling, Penang (19th–20th Century) Function: Community Mosque Building Type: Colonial-Mughal-Moorish	Mosque: Panglima Kinta, Perak (19th–20th Century) Function: Community Mosque Building Type: Colonial

Figure 6-43 Colonial-Hybrid Mosques Floor Plans.

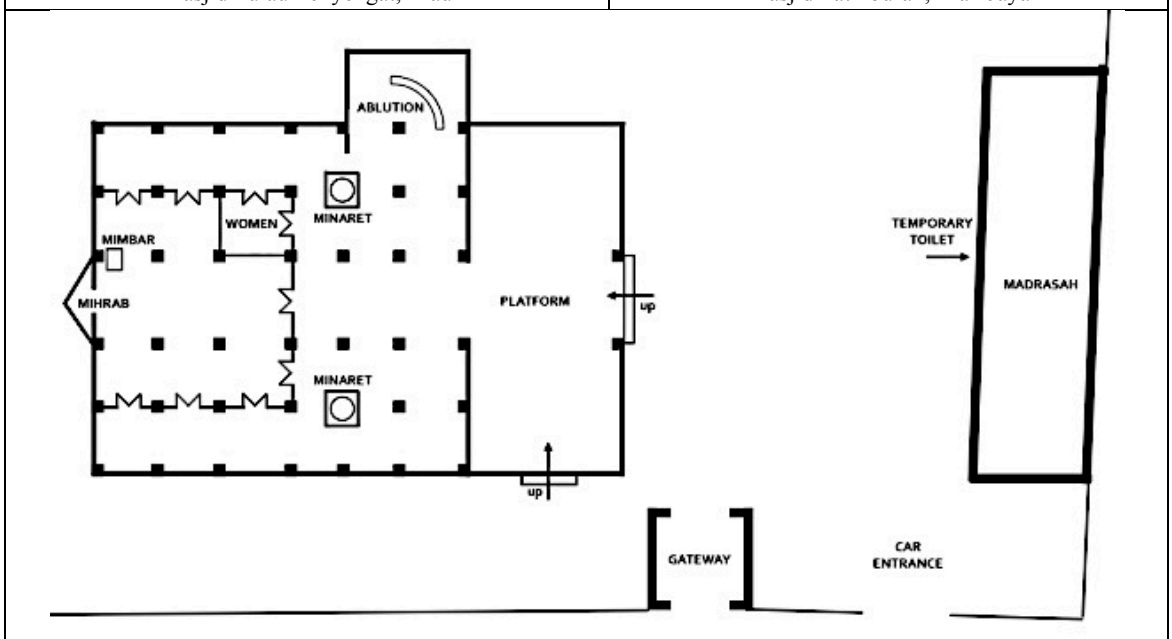
Three mosques in this study have been classified as exhibiting foreign influences due to their peculiar physical characteristics. All of these mosques were built in the 19th and 20th century period. They are Masjid Pulau Penyengat Riau, Masjid Patinburak Irian Jaya and Masjid India Perak (Figure 6-44).



Masjid Pulau Penyengat, Riau



Masjid Patinburak, Irian Jaya



Masjid India Perak

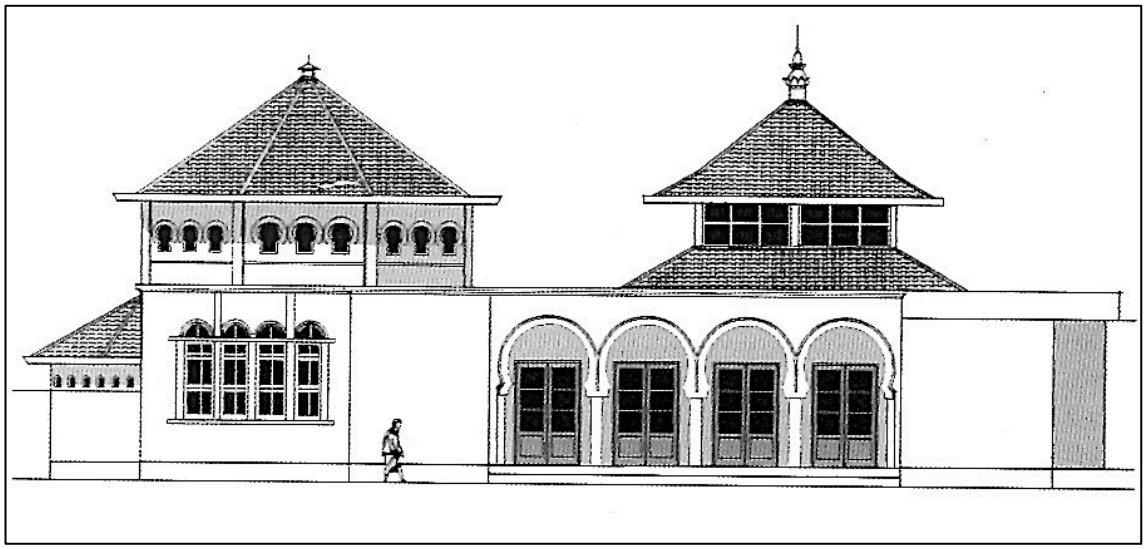
Figure 6-44 Floor plans of foreign-hybrid mosques.

6.4.1 Mosque's Spatial Planning

Unlike vernacular mosques that possess distinguished spatial typology, non-vernacular mosques do not exhibit a consistent pattern in terms of internal spatial arrangement. However, a distinctive feature of mosques in this classification is the exploration of floor plans employing shapes other than rectangle or square. Most of these mosques used composite geometric forms, which the present study finds were sometimes the outcome of merely pragmatic solutions, but more often were a result of experimentation with the juxtaposing of geometric spaces.

In mosques such as Masjid Kebon Jeruk (18th century) and Masjid An-Nawier (18th century), the geometry of the floor plans was the result of extensive enlargement of the mosques' prayer halls. In Masjid Kebon Jeruk, the old structure of the mosque is currently located in the centre of the new construction, with the roof concealed by the new façade. The mosque, which was originally 10 by 10 meters, was expanded on all sides, including the *mihrab* and *qibla* wall. In four upgrading works done to the mosque since 1950, the floor space was extended to the site's boundaries. Part of the original walls of the old mosque can be seen at the centre of the prayer hall, supporting the pyramidal roof structure, which now has become a central skylight to the prayer space (Figure 6-45).

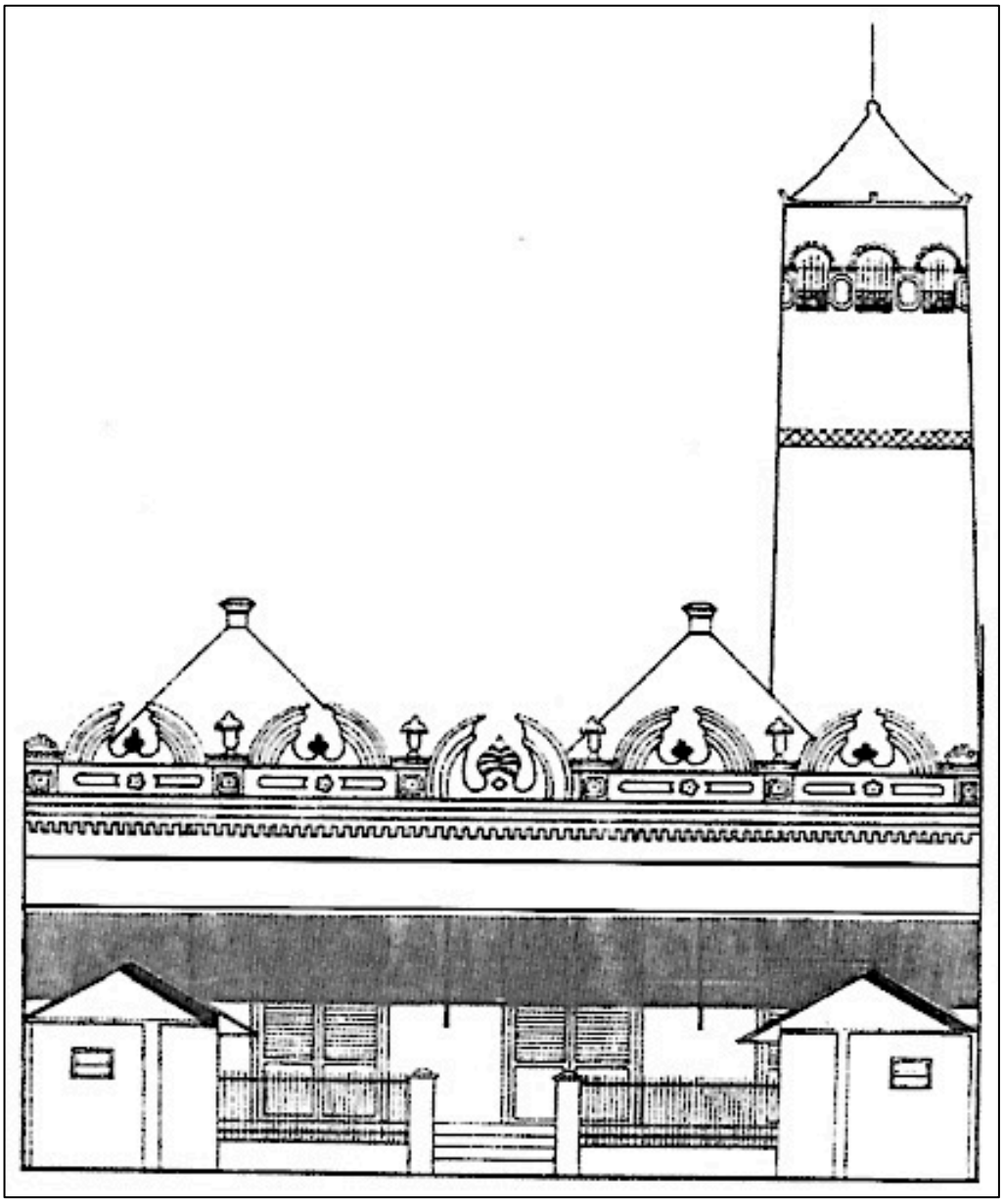
The new *mihrab* is shifted to the edge of the western boundary, forming an octagonal plan on the ground that is also reflected by the octagonal base projection above the flat roof covering the prayer space near the *mihrab*. Due to the alterations made to the interior of the mosque, the *qibla* axis becomes blurred, as one can get disorientated by the odd mix of old and new structures. The efforts in retaining the old structure within the new, although admirable from one perspective, create more confusion in space definition and orientation. The walls of the old structures pose as physical barriers for *saf* alignments. In addition, defining the central space by leaving the old structure and enhancing its characteristic by using the roof as a skylight generates contradiction in space hierarchy. Apart from the narrow veranda at the entry façade, there is not enough social space provided in the mosque.



(a) Masjid Kebon Jeruk elevation (Source: A. Heuken, 2003).

(b) The original part of Masjid Kebon Jeruk, with walls supporting pyramidal roof (Source: Masjid 2000)

Figure 6-45 Masjid Kebon Jeruk.



SOURCE: (A. HEUKEN, 2003)

Figure 6-46 Front elevation of Masjid An-Nawier.

Masjid An-Nawier similarly underwent extensive renovations that involved pushing the façades to the boundary, leaving very little open space in front of the mosque. The original part of the mosque is believed to be the square plan area where the *mimbar*, *mihrab* and minaret are currently located. The mosque currently has a narrow entrance with a very distinctive façade design. A parapet wall with pairs of half wings (originally) painted in green with old lamp plaster ornamentation in between the wings somehow projected an Indian identity (Figure 6-46).

Adjustment of the *qibla* wall to acquire the correct orientation has caused problems in terms of *saf* alignments. As the *safs* are now arranged according to the new orientation, they conflict the alignments of the structural pillars, which are unnecessarily cumbersome given the small space they are in (Figure 6-47 (a) and (b)). Similar to Masjid Kebon Jeruk, provision of social space is overlooked as the floor space is maximised to accommodate as many *safs* as possible. Prayer space for women is located within a confined narrow area to the left of the *mihrab*, and its ability to provide comfortable space for prayer is further compromised with the deflection of the *saf* lines (Figure 6-47 (c)).

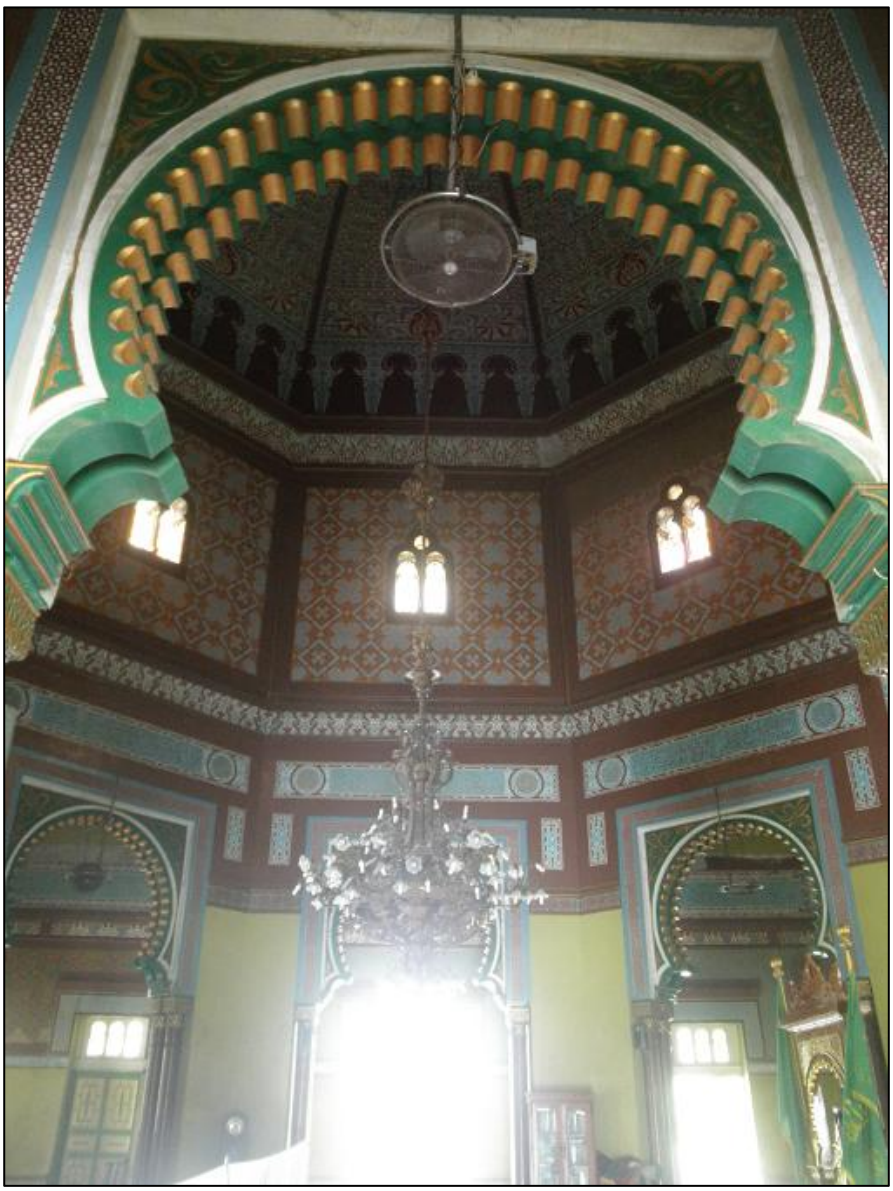
(a) Masjid An-Nawier – *mihrab* protruded from the western wall to provide the correct orientation.

(b) Classical columns dominating the prayer hall.

(c) Women's prayer space tucked in a corner.

Figure 6-47 Masjid An-Nawier.

Interplay of geometric forms is evident mainly in mosques employing domes and minarets. As incorporation of these architectural elements requires additional support, many of these mosques are found with cumbersome interior structures in the middle of the prayer space. Not only do these structures disrupt the *saf,* they also confuse the clarity of the *qibla* axis. Masjid Azizi (20th century) (Figure 6-48), Masjid Zahir (20th century) (Figure 6-49), Masjid Ubudiah (20th century) (Figure 6-50) and Masjid Kapitan Keling (20th century) (Figure 6-51) have octagon within composite geometric floor plans. The structures required to support the central dome are aligned to form walls creating a demarcated octagonal-shaped central plan.



SOURCE: (RADZI SAPIEE HTTP://ARTMELAYU.BLOGSPOT.COM)

Figure 6-48 Masjid Azizi, Langkat.

Figure 6-49 Masjid Zahir, Kedah.

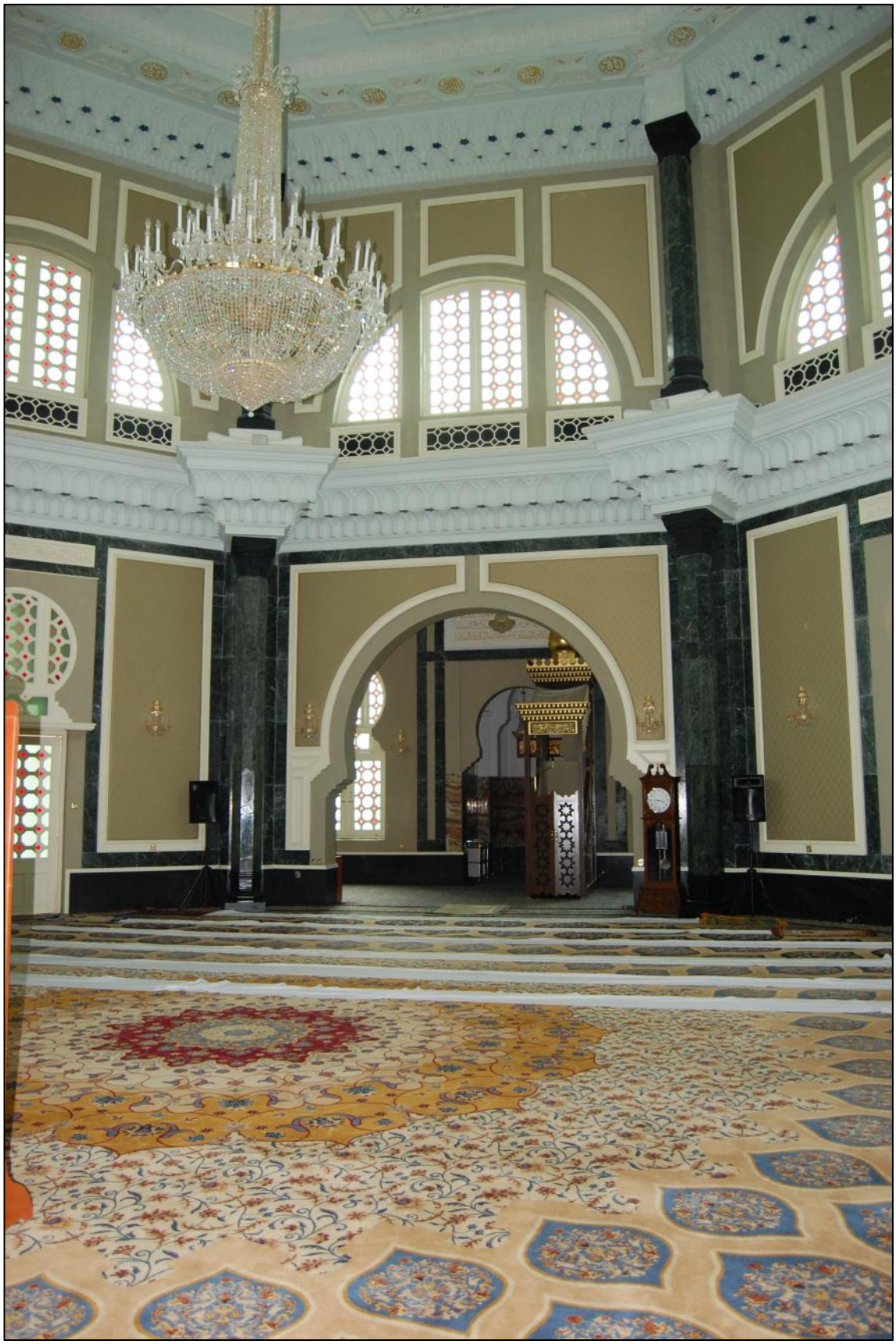


Figure 6-50 Masjid Ubudiah, Kuala Kangsar.

Figure 6-51 Masjid Kapitan Keling, Pulau Pinang.

Masjid Pulau Penyengat (19th century), Masjid Patinburak (19th century) and Masjid India Perak (20th century) have also been categorised as mosques having foreign-hybrid influence. The architectural languages of these mosques exhibit foreign influence, using stylistic idioms that are not found in colonial-influenced buildings. Masjid Pulau Penyengat (19th century), which incorporated 13 domes and 4 minarets within an area of 20 meters by 20 meters, ended up with a tight praying space, as structural columns dominated the prayer hall (Figure 6-52). The four minarets placed at the corners of the prayer hall further cluttered the already amplified scheme with their octagonal and circular base plans (Figure 6-53).

Figure 6-52 Masjid Pulau Penyengat.

Figure 6-53 Minaret of Masjid Pulau Penyengat.

Masjid Pulau Penyengat seems to have been inspired by Ottoman architecture. The numerous domes with slender pointed minarets have been the signature of Ottoman mosques since the time of Sinan (c. 1490–1588), the great architect of the Ottoman Empire (Crane, Akin, & Necipoglu, 2006, pp. vii–xvi). The structural layout and physical qualities (such as the pointed minarets) of the Ottomans can be seen reproduced in the mosque's scheme, only to a different scale and proportion. For a relatively small mosque, the interior of the mosque is crowded, with colossal round columns adjoined at the top with arches (as the floor space is subdivided into segments according to the structural layout, which supports the roof's domes). It is possible that such a reproduction is made possible through copying the design from sketches done by travellers. However, the outcome is a much abridged version in terms of its proportion and building technologies employed.

SOURCE: (HTTP://WWW.TURKEYTRAVELRESOURCE.COM)

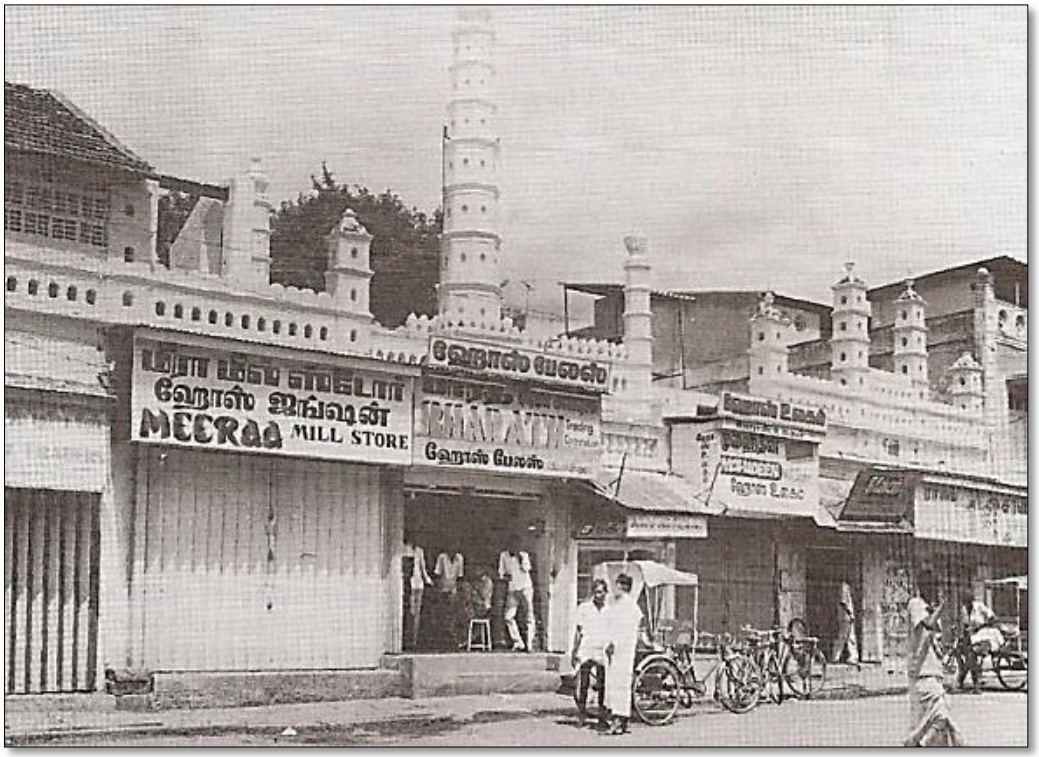
Figure 6-54 The Blue Mosque, Istanbul, Turkey (b. 1609–16).

Masjid Patinburak, on the other hand, resembles a small chapel with its cruciform plan and a copula projecting from its central space. The central part of the prayer hall forms a three-level construction that from afar looks like a small tower. The tower has an octagonal plan, and it forms a pointed rooftop. The protruding porches are semi-open and their hip roof structures are extended from the main roof of the prayer hall. The cruciform plan and the physical outlook of the mosque unmistakably echoes the design of a small chapel (Figure 6-44). It is possible that as Islam and Christianity came to the island at about the same time, the mosque may have drawn its inspiration from an existing chapel[107].

Masjid India Perak, built by the South Indian Muslim community, is a direct reproduction of South Indian Muslim structures (Figure 6-55). The architectural repertoire distinctively belongs to South India rather than any local or other foreign influences (Figure 6-56). The entry to the mosque compound is marked by a gatehouse in the form of fortress design with a pointed archway and crenelated parapet design with pierced works. A pyramidal roof structure covered the sanctuary area, while the edges of the roof line are concealed with decorative pierced parapets with moulded battlements painted in green and white. Antefixes embellish the top part of the parapets, with small onion-shaped dome-like mouldings on small columns breaking up the antefix at regular intervals. The mosque has two slim and tall minarets, in the form of round-based towers with decreasing diameters as they get to the top. The top parts are again decorated with onion-shaped domes with pointed tops.

[107] Information taken from http://bujangmasjid.blogspot.com/2012/02/masjid-patimburak-masjid-tua-kota-kokas.html

Figure 6-55 Architectural features of Masjid India Perak.



SOURCE: (SHOKOOHY, 2003).

Figure 6-56 South Indian mosque façade.

6.4.2 The Minaret

Unlike with the vernacular mosques, the minaret forms an important component in mosques categorized as having colonial and foreign influences. These mosques demonstrate an array of variations and influences in their design of minarets (Figure 6-57 to 6-59). They are in general very tall, to the extent that one cannot imagine it is convenient for the *muezzin* to ascend five times a day to proclaim the *adhan*. With the loudspeakers attached to most of the minarets, it is evident that these minarets serve mainly as architectural elements of the overall scheme and symbolically represent the traditional function (and method) of summoning people to prayers.

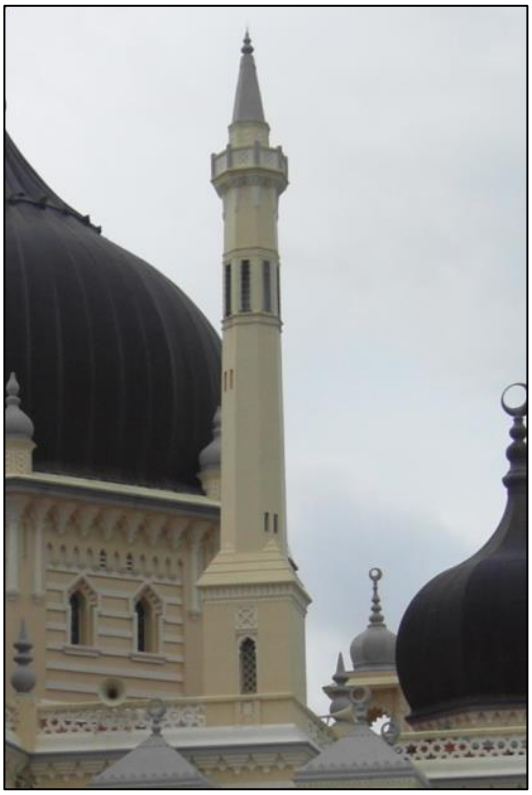
Masjid Azizi

Masjid Leboh Acheh

(PHOTOGRAPH OF MASJID AZIZI, SOURCE: HTTP://WWW.PETERCHANDRA.COM/GOTO/MASJID-AZIZI.HTML)

Figure 6-57 Minarets of Masjid Azizi (left) and Masjid Leboh Acheh (right).

MASJID SULTAN ABU BAKAR



MASJID ZAHIR

MASJID UBUDIAH

Figure 6-58 Minarets of Masjid Sultan Abu Bakar and Masjid Zahir (top); and Masjid Ubudiah (bottom).

MASJID KAPITAN KELING

MASJID PANGLIMA KINTA

Figure 6-59 Minarets of Masjid Kapitan Keling (left) and Masjid Panglima Kinta (right).

The minarets of Masjid Azizi, Masjid Leboh Acheh, Masjid Sultan Abu Bakar, Masjid Ubudiah, Masjid Kapitan Keling and Masjid Panglima Kinta have octagonal bodies with various bases and façade treatments. Masjid Abu Bakar and Masjid Kapitan Keling's minarets are set on square based structures in the model of a gateway. While the first resembles the square based tower popularly employed in Victorian buildings and Gothic architecture, the base of the latter has multi-foil arch openings with *chatri*[108] pavilion structures embellishing the corners. Another mosque that has octagonal-shaped minaret and employs a *chatri*-like structure is Masjid Ubudiah. With its horizontal banded marbles, the technique also reflects the popular Spanish-Moorish application.

[108] *Chatri*: Indian pavilion consisting of a horizontal slab carried on four colonnettes, also called *chavada,* often with an ogee-shaped roof (Dictionary of Architecture).

Masjid Leboh Acheh also has an octagonal base minaret that sits detached from the main building. The diameter is reduced as the minaret gets taller. The architecture of this minaret resembles a lighthouse design. Masjid Azizi has a slim, pointed minaret with a cone top incorporated in the main building. It resembles the tall slim minarets of Ottoman mosques, as found in the Suleimineyye Mosque in Istanbul. Masjid Panglima Kinta has its minarets built to the corners of its entry wall. It has an octagonal base, with horizontal mouldings breaking its verticality at several intervals. The diameter gets smaller as the minaret gets taller, with the top tapered at three levels to create a cone top. Masjid An-Nawier has a round minaret that, based on the floor plan, may have been a detached structure that was incorporated into the main building during upgrading works. This minaret similarly has a cone top with speakers attached to its windows.

Masjid Pulau Penyengat has two types of minarets: octagonal and round. Both types have green painted pointed cones, with horizontal green mouldings protruding at intervals. Just above the base of the minarets are platforms that are accessible through the doors of the minarets. Masjid India Perak has tall slim minarets, the heights of which are broken at almost equal intervals with green protruding bands. The tops of the minarets are adorned with onion-shaped finials.

In Masjid Patinburak, an octagonal structure with a copula that rises from the central roof structure above the prayer space is used as a minaret. This structure has a platform, which is accessible through the stairs provided from inside the main hall.

6.5 Comparison with the Prophet's Mosque Archetype

ESSENTIAL COMPONENTS OF THE PROPHET'S MOSQUE	VERN-T	VERN-LR	COL-FOR
A designated space marked with fence, walls or trenches demarcating between sacred and profane.	■	■	■
Haram of the mosque, indicated by the presence of *rihab* surrounding the prayer hall.	■	■	□
Floor plan of the area is usually rectangular or nearly square.	■	■	□
Single-storey open plan.	■	■	□
Bayt al-salah designated to the area parallel to the *qibla* wall with the roof covered.	■	■	□
Central open courtyard (*sahn*).	○	○	○
Covered left and right wing may have been further extensions of covered prayer hall.	■	□	□

LEGENDS

■ FULLY PROVIDED	**VERN-T**: VERNACULAR *TAJUG*
□ PARTIALLY PROVIDED	**VERN-LR**: VERNACULAR LONG-ROOF HOUSE
○ NOT PROVIDED	**COL-FOR**: COLONIAL AND FOREIGN-HYBRID

Table 6-1 Comparison with the Prophet's Mosque archetypal design.

Based on the detailed analyses carried out on the mosques of Island Southeast Asia, it is clear why the *tajug* prototype was the prevalent design across the region and periods of investigation. It is the only model that fully satisfies the Islamic aspirations of mosque design as found in the Prophet's Mosque archetype. The only element missing from the *tajug* type (as well as others) is the central courtyard. Its compliance to the Islamic requirements for mosque design consequently makes this typology 'the model' for Islamic architecture of this region. Its distinctive characteristics will be demonstrated in the final chapter.

6.6 Mosque as a Death Monument: The Case of Tomb Mosques

As a conclusion to the discussion in this chapter, it is imperative to elaborate on the presence of tomb mosques in Island Southeast Asia and how this typology responds to the requirement of mosque design in Islam. Tomb pilgrimage, especially in Java, found its origin in an ancient belief system that predates the coming of Islam to the Malay World. The term '*ziyarah'* (Arabic for 'visit') finds its embodiment in the traditional practice of *'sowan'* (Javanese for 'visit'), which is considered an act of piety in demonstrating the continuing relationship between the living and the dead (Jamhari, 1998, pp. 34–5). The ritual involves the scattering of flowers (*'nyekar')* upon the tombs of holy figures considered as *keramat* (sacred). Invoking the spirit of the dead and maintaining connections with the ancestors and the denizens of the spirit world forms an essential part of *kejawen* tradition, a syncretic form of Javanese mysticism and spirituality (Howell, 1998, p. 61).

With the coming of Islam, this Javanese form of spirituality quintessentially reincarnates through the veneration of legendary heroes embodied in the *wali songo* and pilgrimages to their tombs to seek aid (Howell, 1998, p. 62). The practice of *ziyarah* to venerated mosques is also a continuation of the pre-Islamic practice of paying tribute to places and sites considered as holy (*keramat*), such as temples (*cita candi*) (Ambary, 2001, p. 89; Sidi Gazalba, 1989, p. 320), which involved scattering flowers on the tombs, lighting incense and pouring water on the graves (Ambary, 2001, p. 89).

Mosques and *candis* (temples) are different institutions, and they function differently. A temple is not intended to accommodate a large congregation and is purposely built on a site 'closed off from the outer world' (Miksic, 1999, p. 54). A mosque is meant to be a living centre, the focus for daily communal activities. The social aspects of the mosque, which are separate and outside of the ritual activities, form an integral part in sustaining the life of the mosque. Without the social aspects, the mosque ceases to function as a community centre. It becomes merely a place for prostration, which does not have to take the form of an edifice or an institution since the act of prayer can even be performed in a quiet alley or in one corner of the house.

In Islam, the living and the dead occupy different worlds – the world of the dead being one that the faithful are not expected to dwell upon, as it is outside of the bounds of their knowledge. The Prophet (S) was asked about it (the spirit), and the *Qur'ān* clarifies the issue in Surah Al-Isra' verse 85:

> 'And they ask you (O Muhammad) concerning the Ruh (the spirit); Say: "The ruh (the spirit) is one of the things, the knowledge of which is only with my Lord. And of knowledge, you (mankind) have been given only a little"'.

Islam views death as the separation of the spirit *(ruh)* from the body *(jasad)*. It is a point of departure (from this world), as well as a beginning for an eternal life whereby a person will be rewarded according to his deeds during his lifetime on earth. The moment a person dies, he is cut off from everything he possessed in this world – except for rewards he acquired from his children (who remember and pray for him), good deeds that he left (which will continue to accumulate in rewards as more people benefit from them) and any knowledge that he has taught and that has benefitted people.

Therefore, the practice of providing the dead with 'funeral goods' does not exist in Islam. The only provision that one takes to the graves is his good deeds, which will only be fully repaid on the judgement day: 'Everyone shall taste death. And only on the day of resurrection shall you be paid your wages…' (3: 185).

Similarly, the practice of invoking the spirit of the dead or venerating the ancestral spirit are all inherited from ancient practices that are remotely connected to the teachings of Islam. On his deathbed, the Prophet (S) warned against turning mosques into tombs, or making tombs into devotional spaces.

In a *Hadīth* narrated by 'Urwa: 'Aisha (r.a) said, when the Prophet (S) was grievously ill, he (S) said,

> 'Allah condemns the Jews and the Christians for turning the tombs of their prophets into places of worship and prayer' (Al-Bukhari, Vol. II, p. 232).
>
> 'Aisha (r.a) said, "When the Prophet (S) was at his death bed, several of his wives were talking about a church called Maria that they saw in Ethiopia. Um Salama and Um Habiba – both, who have been to Ethiopia – talked about the beauty of the church and the images (illustrations) they saw in it. (Upon hearing this) the Prophet (S) raised his head and said, "When one of them dies, they will venerate his tomb and make pictures of the dead above the tomb. They are the worst of creatures, in the eyes of Allah"' (Al-Bukhari, Vol. 11, p. 237).

Islam clearly differentiates between the mosque and the graveyard. In a *Hadīth* narrated by Al-Bukhari, the Prophet (S) said, 'Conduct salat (prayers) in your houses, and do not treat your houses like cemeteries' (Ibn Hajar al-'Asqalani, 1989; Hadith 432, p. 696).

In his transliteration of this *Hadīth,* Al-Bukhari commented that the saying of the Prophet (S) meant, 'Do not become like the dead, who are not required to conduct *salat* in their "houses" – which are the graves; therefore do not turn your houses into graves by not performing *salat* therein' (Ibn Hajar al-'Asqalani, 1989, p. 696).

Based on this *Hadīth*, it is clear that Islam perceives the mosque as a centre for the living, while the graveyards are for the dead. The exaggeration of the sacrosanct aspect of the mosque by turning it into an object of veneration fundamentally shifted its main function as a living centre (Sidi Gazalba, 1989, p. 320). The devotional activities in tomb mosques are occasional, as they rely on the tomb pilgrimage activities that are done according to the ancient Javanese calendar, or according to the significant days in commemoration of the dead, which is done on the third, seventh, fortieth, hundredth or one thousandth days (Ambary, 2001, p. 96). The mosque, in contrast, requires constant, daily and continuous participation from all sections of community members, not merely from those who need to have their prayers answered.

The tombs of individuals considered as holy, or those of royal blood, are also made outstanding through their physical treatment. They are usually located under shade, called *cungkup* in Java, sometimes in a completely covered structure that is beautifully decorated. Tomb design and decoration is evidence of the status, hierarchy and charisma held by the deceased (Ambary, 2001, p. 109). These tombs are distinguished by their placement, often within walled compounds with *candi bentar* or *kori agung* gateways, located to the west, in the direction of the *qibla* (Abdul Rochym, 1983, p. 87). The graves of ordinary individuals are usually marked by the *mesan* or *batu nisan* (grave marker), sometimes with two to three course bricks built marking the grave's boundary, without any roof covering above them.

The placement of tombs in the western direction, which Prijotomo (1984) accurately observed as being in the line of the *qibla*, contradicts the *Hadīth* of the Prophet (S): 'Do not sit on tombs, and do not pray facing them' (Sahih Muslim, Vol. II, p. 460). The erection of structures on the graves, or heightening the graves to exhibit

prominence (Sunan Abu Dawud, Vol. II, pp. 914–5), contradicts the concept of burial in Islam (Al-Bukhari and Muslim).

The egalitarian nature of Islam is enforced both during one's lifetime as well as in the occasion of death. The body of the deceased is washed (Al-Bukhari, no. 1253), prepared for burial and covered in a specific manner using unsewn white clothes (Al-Bukhari, nos. 1264, 1271, 1272, 1273, 1387). The last congregational prayer is performed on him, then his body is laid into the ground without the use of a coffin, with his body orientated facing the *qibla* (Al-Bukhari, nos. 1317, 1320, 1334, 3877, 3878, 3879). There should not be any difference in treatment between one to another, regardless of their worldly status.

The presence of tomb mosques is essentially counter-productive, and contradicts the fundamental conception of mosques in Islam. It violates the mosque's design briefs in various aspects: in its site selection and placement, in its incorporation of a burial ground into the mosque's compound, in the tradition and culture associated with burial rites and in its deviation from the mosque's principal function as a centre for the living. The presence of the tombs of the revered individuals in a mosque area consequently encourage the spread of other graves, thereby turning the mosque's compound into a cemetery.

This scenario is common in the majority of Island Southeast Asian mosques studied, to the extent that it can be considered a distinctive pattern of the mosques in this region. The exaggeration of the sacrosanct aspect of the mosque effectively restrains the social aspects of the mosque, as clearly demonstrated in the absence of proper accommodation for women and children. Women were only provided 'properly designed' spaces if they were to be used for functions related to the commemoration of the dead.

The *pawestren*, in many of the mosques surveyed, were solely dedicated to veneration functions. In ordinary circumstances, women are placed either at the back or at the *serambi,* with just a curtain drawn or a removable partition provided to define their prayer area. Similarly, children are not expected to be present in the mosques, as their inclusion in the devotional activities will disrupt the 'holy' nature of the mosque. The transformation of what was to be the *rihab* (open space) of the mosque into cemetery grounds naturally deters any child from using the field as a playground. In

fact, any activities with 'profane' connotations will not normally take place in an environment that is clearly dedicated for the dead and spiritual life.

There may be a rational and even religious explanation as to why the cemetery forms an integral part of the mosque's landscape. Islam enjoins that the body of the deceased must not be kept, and when possible should be buried immediately (Sahih Al-Bukhari, no. 1315). By having a cemetery adjacent to the mosque, the burial process is hastened. The burial of a person near the mosque – especially near the *mihrab* – in the perspective of the Malay people in the 19th century, has an after-world benefit, as 'he may hear the blessed mutter of the Friday services for ever' (Gullick, 1987, p. 279). Whatever the justification is, many of the characteristics of the tomb mosques demonstrate the continuation of ancestral practices related to burial rites and the concept of holiness.

7 CHAPTER 7: THE IMPACT OF HUMAN AGENCY ON MOSQUE DESIGNS

7.1 Introduction

Community mosques make up the biggest proportion of mosque types built by the Muslims. As evident from the samples taken for detailed analysis, community mosques are more than twice in number (i.e., 28 compared to 13) than mosques built by rulers (Sultanate mosques) (see Chapter 5.2.1). However, despite their quantity, many of these mosques lack prominence. They are usually built using ordinary materials and techniques that lack any outstanding architectural characteristics deserving further scrutiny. Consequently, not much information regarding the relationship between the mosque and its patrons can be retrieved from mere physical analysis of community mosques. On the other hand, many mosques that have royal patronage are statements in themselves.

However, from one period to another, and one geographical location to the other, one can trace particular mosques that were outstanding for various reasons. The impact of human agency, whether it comes from the mosque's patron, financier, clients, builders or designers, often narrates the social function of the mosque within its geographical and temporal contexts. This section will look into some of the more distinguished mosques from samples of this study, in order to highlight the impact of human agency in their design schemes. Parallels will also be drawn from other samples of human interactions pertaining to mosque design in order to capture the meaning and significance of these relationships.

7.2 Constructing Identity: Patrons and Image-Setting

As early as the 15th and 16th centuries in Island Southeast Asia, the mosque has been used as a propagandic medium. This is nothing new, as the role of the mosque in broadcasting the image of its patron or the nation that it presented has been recorded since the Umayyads' rule. Mu'wiya (r. 661–680), when being criticized about his taste for flamboyant architecture based on the Byzantine model, defended himself by saying, 'We are at the frontier and I desire to rival the enemy in martial pomp, so that he may be witness to the prestige of Islam' (Hillenbrand, 1999, pp. 16–7).

In Java, Masjid Menara Kudus, also known as Masjid Al-Aqsa, is the only mosque known in the 15th century to have adopted an Arabic name. More significant is the fact that the name *'Al-Aqsa'* refers to the third holy mosque in Islam, which is located in *Al-Quds* (i.e., Jerusalem).

How this mosque and place acquired their Arabic names was largely related to the personality of the mosque's patron Ja'fār al-Ṣadiq. An inscription written in Arabic located above the *mihrab* contained several important details concerning the naming of the mosque, its town *Al-Quds* (Kudus) and its patron Ja'fār al-Ṣadiq (see Chapter 4.2.5). According to Graaf and Pigeaud, Ja'fār al-Ṣadiq, better known as *Sunan Kudus*, was appointed as the fifth imam of Masjid Demak during the end of Sultan Trenggana's reign, and served until the rule of Sultan Prawata. A conflict between him and the Sultan of Demak caused him to leave Demak and settled in *Tajug*, the ancient name for Kudus (Graaf & Pigeaud, 1985, pp. 109–11).

Kalus and Guillot (2002) in their study of the inscription have attempted to construct parallelism between Kudus in Java and Jerusalem, and between the Sunan Kudus and Prophet David. Although it is indisputable that Kudus is the only city that has acquired an Arabic name, taken after the third holy city of the Islamic world, there was not enough evidence to suggest that Ja'fār al-Ṣadiq had a tangible intention to establish a new Jerusalem in Java (Kalus & Guillot, 2002; pp. 54–6). As underlined by Peter J. M. Nas, it is one thing to create a new spiritual city in Java; however, it is another to suggest that Kudus is the Javanese Jerusalem, as it has to share its status with other preceding and more prominent Islamic centres such as Gresik, Cirebon and Demak (Nas, 2006, p. 203).

However, it is undeniable that Ja'fār al-Ṣadiq had intended to create a new Islamic centre that could have possibly rivalled the position of Demak. If Masjid Agung Demak was celebrated as having almost the same stature with the *Ka'aba* in Makkah (that a five times pilgrimage to Demak is similar to performing hajj to Makkah) (Irwan Suhanda (ed), 2006, p. 27), the naming of the site as Kudus (i.e., *Al-Quds*) and the mosque as *Al-Aqsa* after the third holiest mosque in Islam that is located in *Bayt al-Maqdis* (Jerusalem) clearly implied a shift in alliance (and allegiance) by strengthening the spiritual link between the *Al-Aqsa* in Java with *Al-Aqsa* in Jerusalem.

This intention is evident when we look at the history of the conception of Kudus. According to Javanese oral tradition, Ja'fār al-Ṣadiq left Demak, probably to be independent from the authority of the sultan. After leaving Demak, he acquired enough agricultural land in the old settlement of Tajug, which provided the foundation for the new centre he built with his followers. It is believed that he had left in adverse terms as there was no indication that Kudus was built with the consent of the Demak ruler or with land granted by him – as was the case with other important mosques during the period of Demak Sultanate. This suggests that Ja'fār al-Ṣadiq had in fact created his own spiritual centre, outside the influence of Demak (Graaf & Pigeaud, 1985, pp. 110–2).

Ja'fār al-Ṣadiq's strategic manoeuver was successful. Since its inception, Kudus was reputed as a place of piety (Ricklefs, 2007, p. 57). The reputation of Kudus as a leading centre for Islamic studies was recognized across the *Dunia Melayu*. In the ancient Javanese literature of *'Pangeran Sangu Pati',* the name Kudus was referred to in the poetry as one of the three (types) representations of Islam that could be found: *Jawa, Kudus atau Kampung* and *Arab atau Sembawa* (Java, Kudus and Arab) (Graaf & Pigeaud, 1985, p. 120). Outside of Java Island, the Malay mystic, Hamzah Fansuri, in his search for God was reported as saying:

> *Hamzah Pansuri di dalam Mekkah*
> *Mencari Tuhan di bait al-Ka'bah*
> *Di Baros ka Kudus terlalu payah*

Akhirnya terdapat di dalam rumah[109]

(Graaf & Pigeaud, 1985, p. 120)

Another important element of Kudus that requires mentioning is the presence of its minaret. The mosque is also known as *Masjid al-Manar* (i.e., the minaret mosque), pointing to the uniqueness of its minaret. At a time when mosques were built without minarets, this prominent structure served as a distinguished identifier of this new Islamic centre. Inajati Adrisjanti (2006, p. 483) argues that the minaret of Masjid Kudus projects itself as a symbol of cultural tolerance, a gesture of compromise and respect for pre-Islamic Hindu tradition. In a way, the presence of the minaret broadcasts that here is a mosque that celebrates cultural heritage. From a different angle, it could also have served as a subtle statement of the dominance of Islam over Hindu, with the reappropriation of the Hindu temple structure as a new mosque element. What exactly was the intention of Ja'fār al-Ṣadiq remains obscure. However, the conglomeration of the Islamic-Arabic and local elements in this mosque proved to be a successful attempt at localising Islam in Java.

In the same way that the minaret of Masjid Menara Kudus served as the trademark of the new 'holy' city, the minaret of Masjid Agung Banten was a recognizable landmark for the Sultanate of Banten. This minaret, which was constructed in the style of a European lighthouse, was propagandic from the day of its inception. While passing through Banten in 1694, Valentijn mentioned a 'stone tower seen from far and wide' (Guillot, 1993). This tower, which was built by Hendrik Lucasz Cardeel, the Dutch stone mason who converted to Islam, differed tremendously from the design of Masjid Agung Banten and the building practice of its age. Even the floor of the mosque was still constructed using rice straw when Jacob van Neck visited Banten from 1598 to 1600 (Pijper, 1985, p. 71). Ordinary houses were also built in vernacular materials, and when the first Dutch people landed in Banten they reported that the only

[109]Meaning: 'In his search for God, he has gone to Makkah, Baros and Kudus, but finally found Him in his own house'. Syed Muhammad Naquib al-Attas in his commentary induced that 'di dalam rumah' (in [my] house) means 'in my heart'.

houses built using bricks were those belonging to immigrant Chinese who lived in Pecinan (Lombard, 2000b, p. 179).

In a similar manner, Masjid Pulau Penyengat in Riau was also ahead of its time in employing multi-domes and minarets in its design. It is unclear what exactly inspired the design of this peculiar mosque; however, its architectural elements suggest a foreign influence, most probably the Ottomans (see Chapter 6.4). From *Tuhfat al-Nafis* we are informed that Pulau Penyengat was a centre of Islamic learning in the 19th century. It was a place where local and foreign scholars were being paid to come to the island in order that all state officials would be able 'to study religion, recite religious books and improve their recitation of the glorious Koran'[110]. One of these learned men was Sayyid 'Abdullah of Bahrain, who stayed in Penyengat for one year and was given 400 to 500 dollars (Raja Ali Haji, 1982, p. 283). Both of the mosque patrons, Yang Dipertuan Muda 'Abd al-Rahman and his predecessor, Raja Ali, were also passionate religious students. Immediately after beginning the construction of the mosque, *Tuhfat al-Nafis* recorded that the Yang Dipertuan Muda 'Abd al-Rahman invited several scholars whose company he enjoyed and, according to Raja Ali Haji, 'he was inseparable from them day and night' (Raja Ali Haji, 1982, p. 279).

We have no evidence that any of these patrons ever travelled to Turkey, although it is possible that the Ottoman influence that reverberated in Island Southeast Asia from the 16th century was even stronger in mainland Islam. However, with the advent of steam shipping in the 19th century, pilgrimage and trade flourished, thus enhancing communication between the local people and their Muslim brothers abroad. The pilgrims or *hajis* of Island Southeast Asia must have travelled to Makkah and Medina and witnessed for themselves the mosque architecture in mainland Arabia.

The Ottoman geographer and traveller Mehmed Aşik who was in Damascus at the end of the 16th century described several congregational mosques in Damascus that were built 'not [in] the style and image of the mosques of Arab lands; they are in the style and image of Ottoman mosques' (Kafesçioglu, 1999, p. 70). Ottoman influence was also evident when Raja Ahmad, the son of Raja Ali, returned from his pilgrimage to

[110] *Koran*: (instead of *Qur'ān*) transliteration as found in Virginia Matheson and Barbara Watson Andaya's edition of *Tuhfat al-Nafis*.

Makkah and presented to his brother Yang Dipertuan Muda Raja Jafar, among others, 'a carpet from Istanbul…[and] a Turkish rifle chased with gold' (Raja Ali Haji, 1982, p. 256). The inspiration for the design of the building may have come through connections with the people who had seen the Ottoman mosques, either in Turkey or in mainland Arabia. It is highly possible that the patrons of Masjid Pulau Penyengat had the 'image of Rum' when designing this small peculiar mosque.

7.3 Negotiating Culture and Tradition in Mosque Design

The early phase of Islamic mission in Island Southeast Asia, although much obscured due to a lack of cohesive evidence, left an impression that the shift from non-Islamic cultures and belief systems to the adoption of Islam was a slow but smooth transition. This is evident from the Islamic material culture of the 15th and 16th centuries, a period that many archaeologists referred to as the 'transition period' (Syafwandi, 1985) (Tjandrasasmita, 1985, p. 5; Ambary, 2001, p. 18). This 'transition' is recorded in the mosques of the 15th and 16th centuries in the form of dialogue between cultural and religious requirements. Sometimes it resulted in reappropriation of old forms and meanings. At times it brought compromise, and often it required the elimination of incompatible elements and values.

The absence of rigid doctrinal requirements pertaining to mosque design was probably the most crucial factor in facilitating the incorporation of local pre-Islamic building traditions and idioms into the mosque's design scheme. In mosques of the transition period the continuity of pre-Islamic building traditions can be traced in their ornamentation, architectural form, site layout and orientation.

Mosques such as Sendang Duwur, Mantingan, Demak, Kudus, Cirebon and Panjunan retained pre-Islamic motifs in strategic locations, consistent with their applications in pre-Islamic times. However, in some cases, these meanings have been renewed to a 'more Islamic' context. Often enough the motif chosen was highly stylised to fit Islamic requirements, while the form and meaning was still quite relevant to the Muslims of the period.

One of the most outstanding examples of this is the Masjid Sendang Duwur. The relief carvings found on the body of the *garuda*-winged gates comprised a *kala* head placed above a *winged meru*. Above the *meru* is a relief of the Tree of Life (Figure 7-1). The motif of a peacock, which represents life in paradise, is also found on the base of the winged gate. Another zoomorphic motif found on the gate relief was the motif of

kala-marga, which floats above and curls around the gate opening[111]. *Kala-marga* – according to Javanese conception – is a floating rainbow that has the body of a serpent with two heads on opposite ends in the shape of a deer or a buffalo. This serpent is believed to be floating above the island of Java, and its heads duck into the seas of Java Island and the Indian Ocean to suck the waters and spit them again upon the earth (Figure 7-2). The rainbow is believed to be a vehicle, a ship or bridge that connects the earth and the heaven – it is the abode of the spirits (Hooykaas, 1956, pp. 291–322). The motifs employed are mostly connected to venerated spirits, life in paradise and guardianship.

PHOTO CREDIT: ALI AKBAR

Figure 7-1 Tree of Life, *Kala* head, door to heaven and *Garuda* wings at Masjid Sendang Duwur.

[111] In Hindu temples, the *kala* finds its origin in the *Kala-mikha* or *Kirtti-murkha* – the *Infinite* manifesting itself through the mythical creature that crowns the arches of the temples' doorways and niches. See (Burckhardt, 1967).

PHOTO CREDIT: ALI AKBAR

Figure 7-2 Serpent spitting water: Masjid Sendang Duwur.

In a similar manner but on a smaller scale, the coral carving of Masjid Mantingan is celebrated both for its techniques and variations in motifs, including figurative motifs such as the elephant and the *hanuman* (monkey) (Figure 7-3). Inspite of the direct adoption of pre-Islamic decorative themes in both of these mosques, the present study is yet to find any objection for their applications in the mosque design schemes, either from historical or contemporary sources.

PHOTO CREDIT: ALI AKBAR

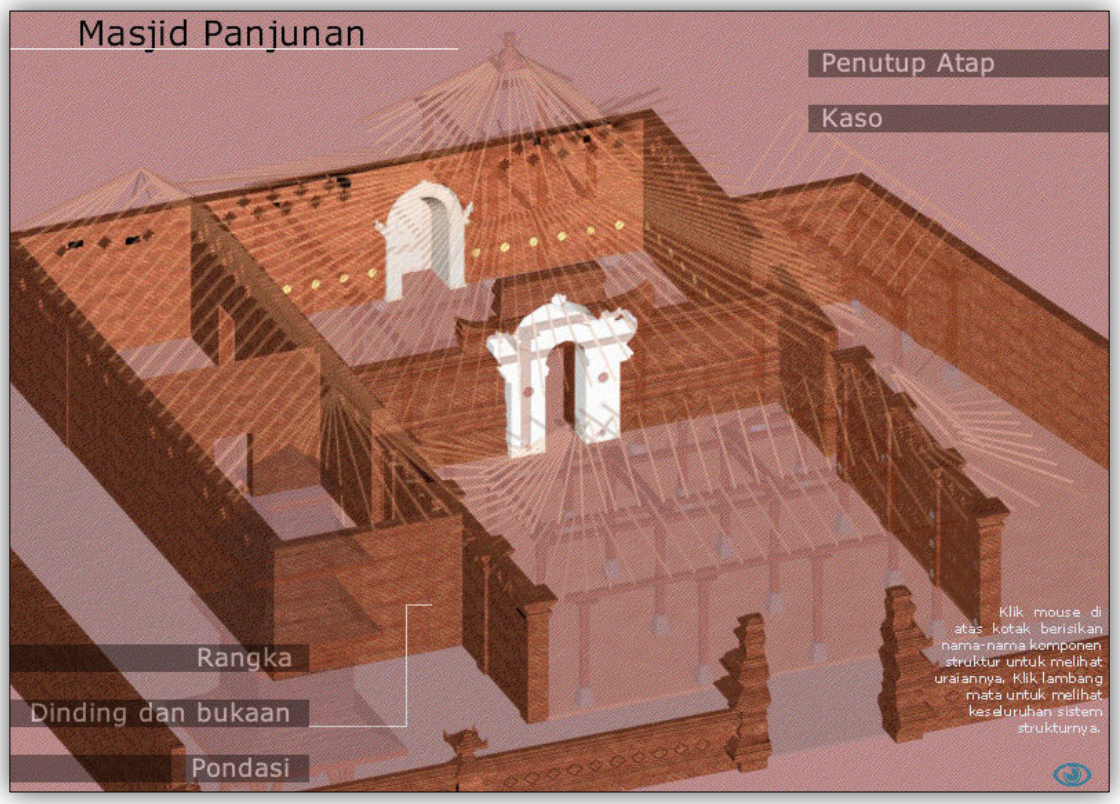
Figure 7-3 *Hanuman* (monkey) motif silhouetted by the floral motifs.

As with the prevalent form of the traditional mosque (i.e. the tiered-pyramidal roof form), many scholars believe that this form originated from the concept of *Meru*, the mystical mountain[112] (Prijotomo, 1984, pp. 84–5). Despite its 'un-Islamic' origin, this form is found to be popular across the archipelago, and persisted well into the 20th century without any clear objections from the Muslims. It was not the scale and height that denoted the importance of this building; it was its pyramidal form that enabled early Muslims to draw parallels for representation of a religious structure and the concept of sanctity (Prijotomo, 1984, p. 84).

Alongside the adoption of the pyramidal form was the reuse of Hindu temple elements, such as the gateway structures *gapura* (Widyosiswoyo, 2007, pp. 83–90). Just as its ancient function was to demarcate between sacred and profane zones, the *gapura*

[112] *Meru* is the seat of gods, it is the *Centre* that stabilizes the world of man, and where the vertical axis originated from the centre unifies all the forces in its infinite peak. See Chapter 2.2.1.

in the mosques of Masjid Sendang Duwur, Masjid Menara Kudus and Masjid Sunan Giri similarly served as markers to denote zones of different levels of sanctity of the mosques' compounds. Here, the ingenuity of traditional design is clearly expressed when the ancient use of axis is reapplied into a renewed meaning. In Masjid Menara Kudus and Masjid Merah Panjunan (Figure 7-4), the *candi* split gates are aligned to define the path of entry and to emphasis the *qibla* axis.



SOURCE: MASJID 2000

Figure 7-4 Masjid Merah Panjunan: gateways defining the *qibla* axis.

In the ancient Javanese tradition, intersecting axes were used as organising mechanisms for the Javanese city, which was perceived as a sacred entity (Santoso, 2008, p. 121). The layout, which is a reflection of the *mandala*, a Sanskrit term used in Indian manuals of government, resulted in a chessboard-like arrangement of the city main monuments, with the *alun-alun* placed as the neutral zone (Kulke, 1986). This arrangement is still evident in some of the old mosques such as Masjid Agung Banten and Masjid Agung Demak.

The Javanese classification system divides spaces according to cosmographical principles and aligns buildings based on a cardinal orientation of north-south. According to this cosmography, the north is profane while the south is sacred. The *alun-alun* in this instance demarcates the boundaries of the two zones. The western part of the *alun-alun* is considered a sacred and holy site. This is the place where many principle mosques (i.e. the Masjid Agung) are found to have been placed (Santoso, 2008, p. 122).

However, according to Santoso, the true cosmic strength that is more powerful than the sacred west comes from the *dalem* – i.e. the *keraton* (palace), which sits in the south. Only the king has access to this strength. From this aspect, the mosque, despite being the symbol of religious authority, was perceived as being merely a complementary element in the Javanese kingship concept. Its authority was limited by the power of the king as, according to this cosmography concept, the real strength that organises the Javanese life is in the hands of the king and not from Islam (Santoso, 2008, p. 124).

This subtle dialogue between ancient tradition and Islam, however, was more pronounced in the later stages of mosque developments. Technological changes in the 19th century resulted in enhanced communication between the Middle East and Java. Due to the advent of steam shipping, the number of *hajis* travelling from Java increased significantly, from a mere 48 in 1850 to 3,554 in the 1872–3 *hajj* season (Ricklefs, 2007, pp. 59–60). This development was a matter of great concern for the Dutch, as they were suspicious of religious influence upon the people (Ricklefs, 2007, pp. 57–61).

The *hajj* seasons provided greater opportunity for cultural exchange between the Muslim communities. However politically and culturally fragmented they were, the *hajj* experience provided them with a point of reference for Islamic unity. As the numbers of *hajis* increased, more people became aware of their cultural differences and began to

reflect on their identities and Islamic piety. Naturally, whatever experience they acquired in Makkah and Medina would have impacted them upon their return. This includes the association of visual culture with piety, which is not only confined to behaviour and dressing, but more important for this study is the question of the role of indigenous culture in mosque design.

This conflict is demonstrated in prominent individuals who, upon returning from Makkah, denounced all cultural forms found to be incompatible with Islam. One of them was Kyai Haji Ahmad Rifa'i, the founder of *Rifa'iyah* or *Budiah* movement, who had lived in Makkah from 1833 to 1841 (Ricklefs, 2007, p. 61). Upon his return, he wrote several books on 'the true and reformed meaning of Islam' and denounced cultural forms such as the *wayang*. He rejected the colonial environment as well as the validity of ceremonies and rituals conducted by religious officers working for the colonial government. Together with his followers, he even built his own mosques, while rigidly avoiding any kind of association with the colonial regime (Ricklefs, 2007, p. 62).

Kiyai Haji Ahmad Dahlan (1868–1923), the founder of Muhammadiyah movement, also sought to abolish unlawful innovations (*bid'ah*) in Java (Ricklefs, 2007, p. 221). He gained notoriety for pointing out to the *Chief Penghulu* in 1896 that the *mihrab* of the sultan's Masjid Agung in Yogyakarta was not correctly orientated towards Makkah. He corrected it by painting lines on the floor; an act disapproved by the latter, who immediately had them removed. As a response, Ahmad Dahlan built a *langgar* (prayer hut) with the correct orientation in the compound of the Masjid Agung, which the *Chief Penghulu* later destroyed (Dijk, 2007, p. 61). The conflict became bitter, and resulted with Ahmad Dahlan being banished by Sultan Hamengkubuwana VII back to Makkah in 1903 (Ricklefs, 2007, pp. 222–3).

The correct *qibla* for Island Southeast Asia is approximately a shift of 22 degrees from cardinal west towards north. As such, in order to properly align the *qibla* wall, the mosque must be orientated not according to the old arrangement, but following the *qibla* coordinates. A review on available literature suggests that there were conflicts recorded with regards to the orientation of the *qibla* and it was not something that the Javanese took lightly.

One of the incidents that demonstrated the Javanese hesitance toward (if not rejection of) the idea of an absolute focal point was found (albeit much later in 1970)

through the personal communication between Revianto Santoso and Mintobudoyo, the architect of Masjid Saka Tunggal in Taman Sari Royal Garden. Mintobudoyo insisted that this mosque must be orientated north-south, against the advice of a group of local architectural historians that the mosque must face the *qibla.* He was adamant on this issue to the extent that he would rather lose his job than have the mosque orientated towards *Ka'aba* (Kusno, 2003, pp. 61–2). When asked his stance on the issue, Mintobudoyo argued that the orientation towards the *qibla* was adjustable (within the mosque's design), whereas the cardinal north-south orientation was a more authentic cultural arrangement that must be adhered to (R. B. Santoso, 2000b).

It is unclear if Mintobudoyo had actually consulted the history of the construction of Masjid Agung Demak as recorded in old Javanese chronicles of *Serat Kandhaning Ringgit Purwa* and *Babad Jaka Tingkir.* The disagreement between the eight *wali* regarding the *qibla* direction occurred after the mosque's main structural components were constructed facing the cardinal north-south direction. According to the *Babad*, it was the Masjid Agung Demak (not the *wali*) that sought to define its own orientation and did not want to submit to the authority of Makkah:

> The mosque nudged to right and left
> Swinging to and fro from north to south
> Still never came to rest (Babad Jaka Tingkir, Pupuh XV, bait 28).

According to the author of the *Babad,* all the *wali* had to 'negotiate' with both the *Ka'aba* and the Demak mosque to coordinate 'an axis of power' that could align these two together (Kusno, 2003, p. 60). The dispute was resolved by *Sunan Kalijaga*, who used his magical power to move the mosque to face the correct orientation.

However, in *Serat Kandhaning Ringgit Purwa* (vol.9, Pupuh CDIX, bait 1–2) it was the wisdom of *Sunan Kalijaga* that won over the argument between the *wali* when he was narrated as saying:

> *Dalam menentukan keblat masjid ini*
> *Mari kita pasang atapnya*
> *Dan dindingnya kita pasang dahulu*
> *Keblatnya dibetulkan nanti* (R. B. Santoso, 2000b).

'Let us cover the structure first, with its roofing and walls, as the *qibla* can be corrected later.'

The dilemma between adherence to cultural heritage and obedience towards the new faith is displayed in the issue of the *qibla,* which is consequently reflected in the material culture of the *mihrab* and *qibla* walls. This study finds that, unlike the *mihrab* and *qibla* walls found in mosques in mainland Islam, the *maharib*[113] of Island Southeast Asia are plain and almost austere in design. With the exception of the *mihrab* of Masjid Agung Cirebon Kasepuhan and Masjid Merah Panjunan, which had distinguished architectural features and motifs, other *maharib* were found to be typical. Only in a few mosques found in the 19th and 20th centuries that had been exposed to foreign influences, such as Masjid Agung Surakarta, Masjid Azizi, Masjid Zahir and Masjid Kapitan Keling, was more attention given to the *mihrab* and *qibla* walls. These *maharib,* however, were often exact replicas of models found elsewhere.

While the conflict of the 15th century was relatively subtle, the dichotomy between cultural and religious ideologies perhaps grew stronger as the nations approached the formation of nation-states in the 20th century. In 1927, for the first time, a protest regarding the ornamentation of an old *mimbar* was recorded in the confrontation between Haji Saleh – who was educated in Makkah – and the old *kyais* of Kajen. This *mimbar*, which was built in 1697–8 by the revered Kartasura figure, Kiyai Haji Amad Mutamakin, was decorated with motifs of two birds holding the ends of a crescent moon, with *naga* heads carved on it (Ricklefs, 2007, p. 243). Haji Saleh insisted that the depiction of living beings was against the Islamic teachings and instructed that the *mimbar* be destroyed. The old *kyais* refused, however, as they said that the *mimbar* '[was] a legacy of the ancestors, who were better able to judge such things than they' (Ricklefs, 2007, p. 243).

[113] Plural for *mihrab*

7.4 Representing Islam

As the societies in Island Southeast Asia moved towards the formation of modern nation-states, cultural awareness increased and people began to reassess their identities. The developments of the 19th century only heightened this awareness, while the positions of culture and Islam were continuously being negotiated. For certain segments of the society, it was 'a story of controlling Islamic expression for [their] own religious ends' in the efforts of 'localizing the global (Islamic) culture' (Kusno, 2003, p. 60). For others, it was about religious purification (Ricklefs, 2007, p. 253) and building a greater alliance with the international Muslim community (Woodward, 1989, p. 115).

This dilemma was well demonstrated in Java, where Islamic mission was heavily protracted. It was only by the 18th century that the inner and central part of Java island finally submitted to Islam (Kratz, 2002, p. 412). By the end of the 16th century, Islamic political hegemony had shifted from the *pasisir* (northern littoral region) to the interior of Java (Steinberg, 1987, p. 83). Yet the Mataram court, who had claimed Islamic authority over the people by the 17th century, was still very much rooted in its Hindu-Buddhist heritage. Its literature, rituals and calendar system were substantially more Hindu-Buddhist than Islam (Ricklefs, 2007, p. 3).

From then on, the *kraton* (palace) paved the way in shaping the arts and literature of the people. However, instead of developing existing culture within Islamic paradigms, the *kraton* delved further into its pre-Islamic roots, producing syncretic Islam by adopting pre-Islamic practices into important Islamic events and elements. In effect, the Mataram *kraton* was successful in reinvigorating pre-Islamic traditions, which were more ethnic based (Graaf & Pigeaud, 1985, p. 262; Ricklefs, 2003, p. 143).

On the level of the lay people, there existed a dichotomy between the *priyayi* (administrative elite group) and the *santri* (professional religious group)[114]. While Dutch

[114] Among the most influential ethnographic studies of the social divisions of Java is Geertz, C. (1960) *The Religion of Java*. Geertz's classifications of *abangan, santri* and *priyayi*, however, were subject to

colonial policy purposefully discouraged contact between the *kraton* and the *santri* (Woodward, 1989, p. 114), at the same time it highly discouraged the association of the *priyayi* children with Javanese *pesantren* (religious schools), as Dutch officials were extremely suspicious of anyone connected to the *pesantren* (Woodward, 1989, p. 115). The effects of this were seen in the polarising of ideologies and the creation of two worldviews – one which became less 'local Islam', and the other that diverged to reinvigorate pure, local Javanese tradition (Woodward, 1989, p. 115).

Perhaps this explains why mosques of the 19th century began to have domes and minarets, instead of new inventive forms based on ancient traditions. It may also justify the disappearance of ancient decorative motifs from post-16th century mosques. Despite the fact that the region was well-acknowledged as having rich artistic traditions[115], mosques of Island Southeast Asian were known for their lack of decoration.

In Masjid Agung Cirebon Kasepuhan, evidence points to the probability that the royal palace actually refrained from interfering with the mosque's decorative scheme. Despite being a sultanate mosque and placed next to the *alun-alun* of the *kraton* of Cirebon Kasepuhan, contrast in decoration treatments between the mosque and the *kraton* raise critical questions as to why ornamentation of the mosque was limited to the *mihrab*, *mimbar* and several structural elements, while at the same time the *kraton* was richly embellished with a range of decorative items (Figures 7-5 and 7-6).

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criticism from various scholars who questioned this simplistic understanding of complex sociological phenomena through rigid divisions of the society according to the classification.

[115] The rich artistic tradition was mainly evident in jewelry and utilitarian objects. When Beaulieu visited Aceh in 1620, he reported the huge amount of gold and silver kept in the palace of the Sultan Iskandar Muda, with more than 300 goldsmiths and craftsmen ready to carve them into designs and artefacts that he desired (Lombard, 2000a, pp. 190–2). In pre-modern Island Southeast Asia, craftsmen working for the royals enjoyed prestige by means of their occupation (Gullick, 1958, p. 31). Hugh Clifford, the Perak resident, reported of the presence of 5000 artisans in Kuala Terengganu, which he labeled as "the Birmingham of the Peninsula" in 1895. Some of the rulers were keen artisans themselves. The Cirebon palace kept evidence of the carvings executed by Panembahan I (r. 1568–1649) and Panembahan Girilaya (r. 1649–1666). Baginda Omar of Terengganu sent woodcarvings that he made as a present to Sir Harry Ord, the Governor of Singapore. Sultan Sulaiman of Selangor embellished the *mimbar* of his mosque with ornamental woodworks consisting of calligraphy of *Quranic* verses, which he carved himself (Gullick, 1958, p. 57).

Figure 7-5 Kraton Cirebon Kasepuhan – range of decorative tiles on the walls.

Figure 7-6 Intricate detailings found on structural and non-structural members.

While Pijper viewed the general lack of decorations in the mosque as a deliberate gesture to accentuate the religious spirit by leaving everything of worldly nature outside of its doors (Pijper, 1985, 29), others blamed Islam as the main factor responsible for the diminishing of the indigenous artistic tradition. Graaf and Pigeaud accused the *wali* as being responsible for the secularisation of art from religion (Graaf & Pigeaud, 1985, p. 85). Soerjo Koesoemo (1919) blamed the 'Arab' element in Islam for the dilution of local culture. He viewed the Arab Muslim's dominion in Java as a form of imperialism that had forced the Javanese to abandon their artistic tradition (cited in Reid, 1983, p. 59). The uneasiness of the 'Arabic dominion' was also captured in one incident in the first decades of the 1900s when, in the middle of a Friday *khutbah*, one man pulled out his red handkerchief and waved it about, demanding that the *khutbah* be given in Javanese rather than Arabic, so that everyone could understand it (Ricklefs, 2007, p. 222).

7.5 Conclusion

The lack of continuity in design conventions, resulting in the chaotic architectural language of post-19th century mosques, are all symptoms of a much serious issue pertaining to the role of Islam and culture as determinants for a distinctive indigenous Islamic architecture. This ensuing dialogue between culture and faith would take a new leap as the question of identity became the main agenda in the formation of modern nation-states. The following chapter will review the inherent characteristics of Island Southeast Asian mosques, and how, due to the inability of patrons and clients to understand and appreciate cultural tradition, they have resulted in a lost opportunity to express local cultures and idioms through Islamic understanding.

8 CHAPTER 8: THE WANING TRADITION IN MOSQUES OF ISLAND SOUTHEAST ASIA

8.1 Vernacular Prototype as an Islamic Architectural Model

The most original features of Islamic architecture in this region are found in the vernacular mosques, demonstrated in the *tajug* and the long-roof house typologies. The *tajug* mosque prototype, which dominated the 15th and 16th century architectural scene (especially in Java), displayed continuity of ancient building practices in its design, placement and ornamentation. The architecture and decorative elements evoke archetypal memories of pre-Islamic traditions, which were adapted to suit the new creed. Outside Java Island, the mosque architecture is found in the traditional house typology, moulded to serve as a religious house. Mosques built in the long-roof house typology, however, are mainly found in community mosques.

The *tajug* prototype persisted well into the 20th century in various parts of Island Southeast Asia. With time, it was found to be efficient in responding to socio-religious demands. Given the lack of references from Islamic sources, as well as the possible inaccessibility of Islamic doctrine pertaining to design requirements[116], the adoption of this specific type of vernacular architecture as a design solution must be considered as the most original interpretation of liturgical requirements.

The principal expressions of the *tajug* architectural quality are embedded in its scale, form and proportion. Due to its structural configuration, it produces a low-scale building that is human-friendly and adaptable to socio-religious requirements. It responds to the need for expansion by incorporating additional structures to the core unit, thus creating a group of buildings that complement each other in scale, form and proportion. The interplay of solids and voids, building heights and form prove to be an attractive feature to users of the mosque.

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[116] This study has demonstrated in Chapter 3 that retrieving design parameters from the *Qur'an* and the *Sunnah* was a challenging endeavour due to the lack of specificities on the material aspects required of a mosque. It is highly possible that the only reference for early Muslims in Island Southeast Asia was retrieved from the liturgical requirements of the congregational prayer (i.e. the orientation towards the *qibla* and the alignment of the *saf*).

Such a design adequately answers the brief outlined in the requirements of the 'house of Allah' by transforming the mosque into a place for retreat and comfort. It provides a better alternative than gigantic architecture in its treatment of the volume of building mass. This feature is best demonstrated in Masjid Kampung Laut, which displays various forms employed, both in plan and elevation, for the main prayer hall (square plan), the *serambi* (rectangular floor plan), the minaret (octagonal floor plan) and several *wakafs* located in its compound (square and rectangular) (Figure 8-1).

Figure 8-1 Masjid Kampung Laut, Kelantan
(top) various building forms of the main complex; (bottom) *wakaf* (small prayer/ resting huts) in the mosque's compound.

The uniqueness of this vernacular type is also embedded in its established pattern of design. In contrast to the Prophet's Mosque, which expands inwards, the vernacular mosque expands from the core outwards. While the sacred zone of the Prophet's Mosque is defined by the solid walls forming a boundary, the vernacular mosque's boundary is defined by its surrounding open space. Therefore, the optimum arrangement for a vernacular model is for the mosque to be provided ample open space that allows it the potential to grow and expand. In addition, the open space functions as a physical identifier for the mosque, in a similar manner that an *alun-alun* served as a traditional Javanese city identifier. Such a requirement has to be incorporated at the conception and schematic stage in order for the vernacular mosque type to reach its full potential.

Outside of Java Island, reproductions of the *tajug* prototype are seen in Nusa Tenggara, Sulawesi, Maluku and Malay Peninsula. Minor variations are exhibited in the constructional techniques and decorative motifs employed. A variant from the popular *tajug* type, however, is evident in the long-roof type mosques. In Masjid Teluk Manok, for example, the incorporation of a small minaret in the roof demonstrates a design solution not seen in the *tajug* prototype. The origin of the tower in Masjid Teluk Manok may have found its reference from the wooden architecture of the northern regions, as it is highly probable that the northern region shares similar building tradition with ancient Thailand and Burma.

SOURCE: (FRASER-LU 2001, P.287)

Figure 8-2 Roof projecton forming small tower-like structure, Kyan-kon Kyang monastery in Thar-ra-wadi district, Burma.

This study finds that many wooden monasteries in Burma were built with tiered roofs and tower-like structures projected from the roof ridge (Figure 8-2). Even the form of Masjid Kampung Laut cannot be considered a pure *tajug* type. Although it borrows the typological form of Masjid Agung Demak, its constructional system is more consistent with Burmese monasteries' wooden buildings, as exhibited in Maroma Kyaung monastery, which was constructed around the same time (Figure 8-3).

Given the contrast adopted in the mosque design solution, it is almost certain that the northeastern coast of the Malay Peninsula was culturally more connected to the northern region (Thailand, Burma, Vietnam and Cambodia) than to Java Island. In addition, as Islam was already established in Terengganu by the 1303 C.E. (as inscribed in the Terengganu stele, *'Batu Bersurat'*), a period much earlier than Melaka or Demak, this suggests that the region owes its building tradition to the much established civilisational developments of mainland Southeast Asia more than the port cities of the *Dunia Melayu*, where Islam finally settled.

SOURCE: (FRASER-LU, 2001, P. 214)

Figure 8-3 The *On Don Bin Shwei Kyaung* monastery, tiered roofs on stilts.

8.2 Formation of Nation-States and Their Effects on Mosque Design

The turn of the 20th century marked the completion of the colonial conquest of the region, with the Spaniards, the Dutch and the British having seized the authority from local rulers. The colonial rule appropriated power from pre-existing states, amalgamated previously separated societies and consequently formed new political frameworks and order within the region. It is of no surprise that the period between 1870 and 1940 was considered as the high colonial age (Steinberg, 1987, p. 173), wherein the colonial rule completed their seizure of the remaining territories, subjugated the people and controlled their resources, leaving only Thailand independent (although still within the sphere of British influence) (Ricklefs, 2001, pp. 157–63; Steinberg, 1987, pp. 171–219).

Under the colonial policy, new bureaucratic systems were imposed as a foundation to prepare the societies for the formation of modern nation-states (Andaya & Andaya, 1982, pp. 114–54). Major public works were carried out, mainly focusing on improving infrastructure – an effort that the colonialist powers invested in in order to move resources from the interiors to the ports – and improving the living standard of the people in their bid to make the region a potential future market in the new world order of liberalism that began to take charge at the beginning of 1900 (Ricklefs, 2001, pp. 193–227; Steinberg, 1987, pp. 212, 256, 332).

In the 19th and 20th century period, European architecture was used in the service of securing colonial rule, through the expansion of building programmes to include major urban creation and the development of existing trading ports (Wuisman, 2007, p. 31). At the beginning of the 20th century, however, there was an increasing dissatisfaction among Dutch intellectual circles on the 'development' of an architectural tradition in the colonised region. In a report by the colonial Department of Agriculture, Industry and Commerce produced in 1914, S. Snuijf, an architectural engineer in the Public Works Department, pointed out the lack of architectural representation when he deplored:

> 'No national colonial architecture exists at present even after the three centuries during which the Dutch have been established in the East. Political and economical conditions have never promoted this, whereas the mild climate and the

> fertility of the soil have never created anxiety on the part of the uncivilised population to acquire better and more permanent dwellings…' –cited in (Kusno, 2000, p. 29).

After decades of colonisation, the Europeans felt that they needed to give the region a new identity for architecture. It was clear that the indigenous architecture had been side lined from the outset, as it was considered inferior and, worse still, without any architectural tradition. This impression was reflected in the arguments of Wolff Schoemaker, a Professor of Architecture at the Technical College in Bandung, West Java in the 1920s, when he said:

> 'The Indies does not have an architectural tradition…Old forms are often no longer suitable to satisfy the practical and spiritual needs, anyway, so far as one can say about indigenous building methods. Architecture in the sense that it has for us does not exist in Java' –cited in (Kusno, 2000, p. 30).

The embodiment of such architectural concerns came in the form of a new architectural identity created by the Europeans for the indigenous people – an architecture that restored the colonial image as the sponsor of prosperity, peace, progress and achievement, sought by the introduction of the Ethical Policy (1920–40). The outcome was the emergence of a 'New Indies Style' (Sukada, 1999, p. 120), which was sympathetic towards Indonesian cultures within the overall vision of Dutch colonisation. For a short period of time (1920–30s), a new synthesised hybrid architecture programme was executed by 'exposing and cultivating the civilisation of the colonised people' to be reorganised using modern technological developments based on a Eurocentric architectural vision of the 'Tropical Netherlands' (Sukada, 1999, p. 120).

The British, on the other hand, used the experience of self-styled architects of the Public Works Department in British India, well-known for their experimentation with the *Raj* and *Indo-Saracenic* styles (Scriver & Prakash, 2007, pp. 33–5). In an effort to define a new legacy for the new city, the architectural experimentation in India was effectively used to serve the colonial purpose. The opportunity to create a new architectural identity for British Malaya came with the election of Kuala Lumpur as the federal capital for FMS. The State Engineer C. E. Spooner's brilliant move to adopt what he called 'Mahometan' design instead of 'Classic Renaissance' to capture the new Malay-Muslim civilisation resulted in a series of fine public buildings, built in the

Moorish-Moghul repertoire that gave Kuala Lumpur its identity (Gullick, 2000, pp. 10–2).

By the turn of the 20th century, buildings adopting Moorish-Indian-Mughal architectural styles dominated Kuala Lumpur. A. C. A. Norman was the architect responsible for designing the Sultan Abdul Samad building, which was completed in 1897, as well as the National History Museum placed adjacent to it. Kuala Lumpur Central Railway Station, designed by A. B. Hubback, was completed in 1911 (Gullick, 2000, p. 53).

The Indian Jamek Mosque of Kuala Lumpur was the first domed mosque on the Malay Peninsula (Figure 8-4). Designed by A. B. Hubback and completed in 1909, it was set at the confluence of two rivers, the Gombak and Klang Rivers, echoing the placement of traditional Malay mosques. Indeed, at the same site there was previously an original wooden mosque completed in 1881, which had to make way for this larger mosque. This new mosque, however, came with pointed-arches, *chatris*, colonnades and domes, with horizontal bands (*ablaq*) wall renderings. It was the first mosque of its kind in British Malaya, and considered a successful application of the Moghul repertoire (Gullick, 2000, pp. 164–5).

SOURCE: MALAYSIARIA.COM.MY

Figure 8-4 Masjid Jamek, Kuala Lumpur (1909).

Other public buildings under the administration of the Malay rulers began to follow suit. As the rulers were heads of states especially in matters concerning Malay customs and religion, mosques were naturally objects of early experimentation. Masjid Ubudiah Kuala Kangsar, built in 1917, was also credited to Hubback's tested Indian-Mughal architectural repertoire. The British also left their legacy in several other sultanate mosques. Masjid Sultan Suleiman of Kelang in Selangor, built in its Art-Deco style, was presented to the sultan as a gift in the 1930s (Dijk, 2007, p. 60) (Figure 8-5). Masjid Jamik in Muar, Johor, was designed in a Baroque style.

SOURCE: TOURISM.SELANGOR.COM.MY

Figure 8-5 Masjid Sultan Suleiman, Kelang.

The events that led up to the independence of the modern nation-states have caused fundamental changes to the life of previously traditional societies whose societal order was very much organised through shared beliefs and customs (Steinberg, 1987, pp. 175–6). With independence, the search for a new national identity found its expression, especially in the architecture. In the efforts to amalgamate the people into one united nation, the newly created states were compelled to express this new identity through architectural styles that were at times alien to the people's cultural heritage.

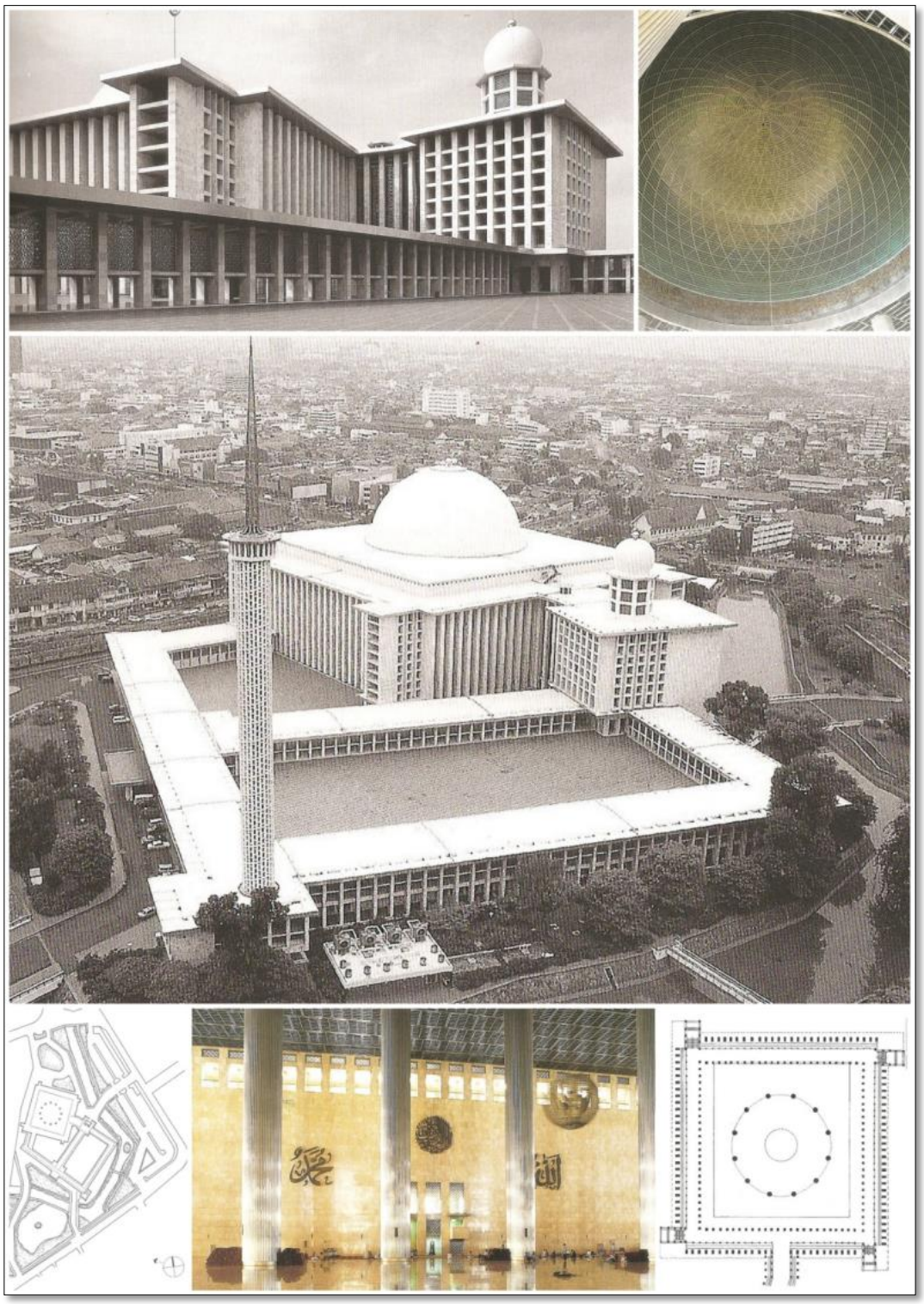
For the 'new' Muslim nations of the archipelago (Indonesia, Malaysia and Brunei), the state mosques became the hallmark of national aspirations, as well as a mark of national achievements. Trapped between cultural heritage and an obsession with projecting modernity, the Muslim nations of the region took different turns in formulating an architectural expression that best represented societal aspirations.

In Indonesia, the Istiqlal Mosque of Jakarta (*Istiqlal* is 'independence' in Arabic) – which was the brain child of K. H. Wahid Hasyim, Indonesia's first minister for religious affairs – emerged from the idea of having a grand national mosque befitting a country with the largest Muslim population in the world. The proposal was forwarded to

Indonesia's first president, Sukarno, in 1949 – five years after Indonesia gained its independence from the Netherlands and a committee was set up to oversee the planning and construction of the mosque. In 1955, through a design competition, the architecture of the first Indonesian state mosque was agreed upon, based on the winning submission of Frederich Silaban, a local Christian architect, with the theme: *'Ketuhanan'* (Indonesian for 'Divinity'). The foundation stone was laid by Sukarno on 24 August 1961; the construction took 17 years, and the mosque was inaugurated by Suharto on 22 February 1978 (Department of Foreign Affairs, 1962; Indonesian State Secretariat, 1995).

The whole process of building the Istiqlal Mosque – from conception to construction – was very much in the climate of defining the identity of a new nation, and the projection of a new direction: Islamic expression embodied in its architecture. Built next to the state cathedral with a capacity to accommodate up to twenty thousand people under covered space and up to one hundred thousand in the courtyard during major Muslim festivals, it is evident that the mosque was intended as a projection of national identity to the international world on a monumental scale.

The huge shift from traditional architecture is obviously expressed in the choice of material used: the employment of reinforced concrete in construction, the flat roofs with a 45-meter diameter central spherical dome covering the rectangular main prayer hall and the minimalist, simple and clean cut interior design with geometric pattern ornamentations (completely in contrast to the architectural heritage of the region). The incorporation of Arabic-Islamic architectural idioms into mosque elements (the dome, the minaret and geometric design) in a synthesis of a totally modern minimalist design was evidently a conscious attempt to define the new architectural spirit of Indonesia. At an early stage of post-independence, the intention of expressing Islam in a modern international vocabulary was clear (Figure 8-6).

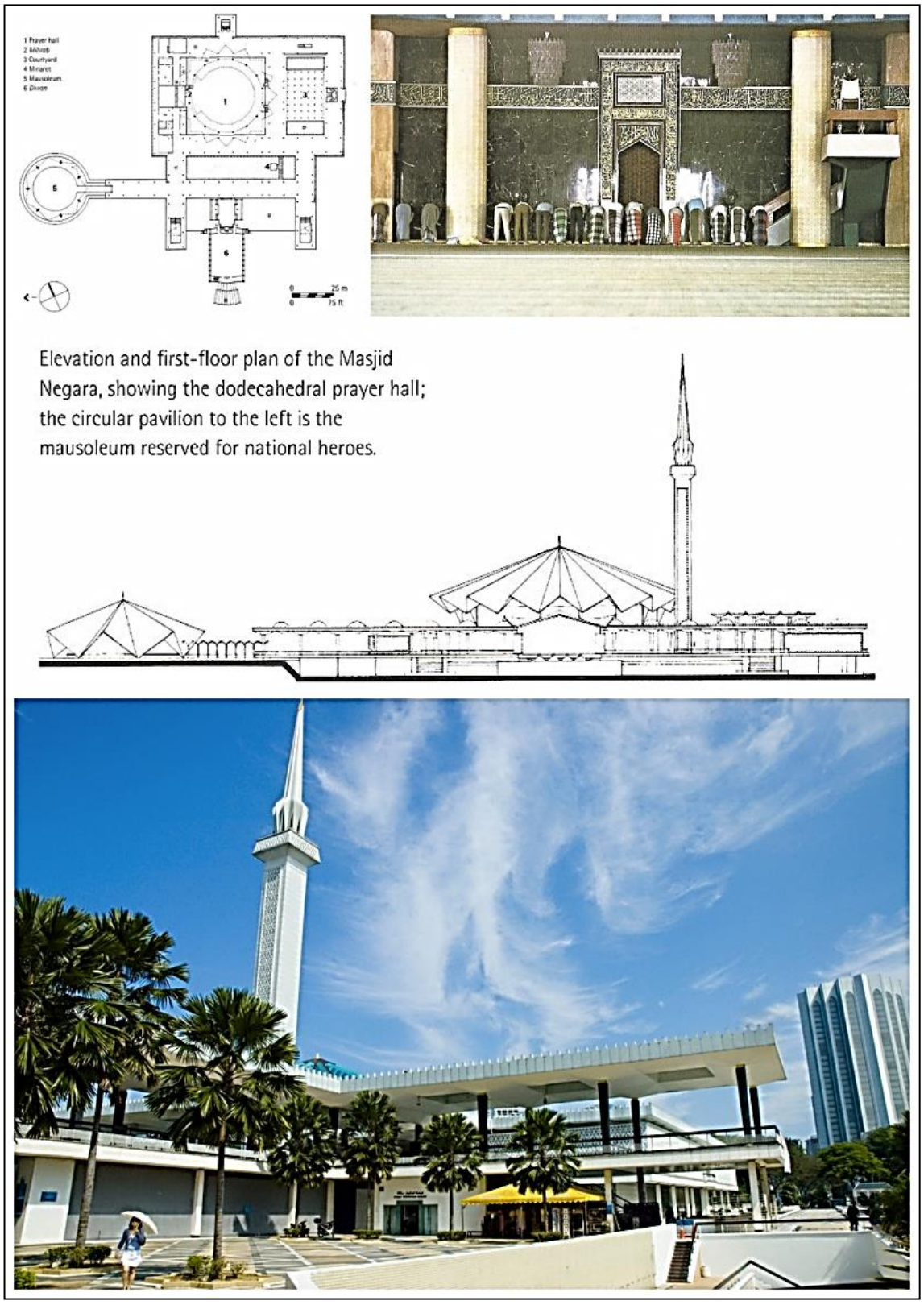


EDITED FROM: (HOLOD & KHAN, 1997)

Figure 8-6 Masjid Istiqlal, Jakarta.

Similarly, in Malaysia, the Masjid Negara (National Mosque) was built in 1965, eight years after Malaysia gained its independence from the British (Figure 8-7). It was designed by a team made up of British architect Howard Ashley, alongside Hisham Albakri and Baharuddin Kassim from the Public Works Department (Holod & Khan, 1997, p. 112; Long & Hussain, 2007, p. 4). Baharuddin Abu Kassim, the architect-in-charge for designing the first National Mosque of Malaysia, travelled far and wide to come up with the right design (Holod & Khan, 1997).

The most eye-catching feature of this mosque is the folded concrete plates forming an eighteen-pointed star, blue tiled roof. It is said to reflect the tropical nature of Malaysian weather with its humidity and heavy rain, with the roof being reminiscent of an opened parasol protecting the people beneath it. From a technical perspective, the folded plates of the concrete roof were an innovative structural solution for the requirement of a large span structure that was able to cover the main prayer hall without any pillars. From the mosque's design conception, the parasol symbolised the sovereignty of the nation as well as the unity of people in Malaya, which comprised 'people from different races and religions to form a Malayan race' (Long & Hussain, 2007, p. 5).



EDITED FROM (HOLOD & KHAN, 1997) AND AZIZUL AMIER (WWW.FLICKR.COM)

Figure 8-7 Masjid Negara Kuala Lumpur, Malaysia.

Brunei – the last state to gain independence – was not to be left out in the race to express nationhood through mosque architecture. The Omar Ali Saifuddien Mosque was officially inaugurated on the 26th of September 1958 – a quarter of a century before this oil rich country gained its independence. The late Sultan Haji Omar Ali Saifuddien Saa'dul Khairi Waddien III, who was remembered as the 'Architect of Modern Brunei', had intended to build a big and beautiful mosque 'as a symbol of Islamic sincerity and strength in the country' (The Brunei Times, 2007).

Based upon an early design prepared by the sultan himself, an Italian architect named Cavalieri R. Nolli was commissioned to carry out the task. Influenced by Mughal architecture, the mosque boasts an onion shaped dome covered with pure gold. It is surrounded on three sides by an artificial lagoon giving an impression that the mosque floats on the water. The boat-like structure on one of the lagoons is known as a mahligai, representative of the royal barge (Figure 8-8). It was added in 1967 to commemorate the 1400th anniversary of Nuzul al-Qur'ān. Its construction materials were all imported: Italian marble, gold mosaic and granite from Shanghai, chandeliers and stained glass from England, hand-made carpets from Arabia and Belgium (http://www.aseancultureandinformation.org/ coci/atn1.php?id=567).

In all of these modern nation-states (Indonesia, Malaysia and Brunei) the abrupt shift from the traditional style to modern architecture was not simply due to the breakup of the archipelago by different political boundaries. The changes did not occur simply due to a desire to be different in the quest for a definition of national identity – although this was undeniably an important factor. Instead, the change of the regional architectural flavour was a result of unresolved dialogue between culture and faith, between old and new; a dilemma exacerbated by the advent of modern technology and the changes brought about by colonialism.

EDITED FROM: PHOTOGRAPHS BY AZIZUL AMIER AND NIZAL SHAHROM IN (WWW.FLICKR.COM)

Figure 8-8 Masjid Sultan Omar Ali Saifuddien, Brunei.

8.3 The Impact of Colonialism on Design Thinking of the Muslims in Island Southeast Asia

After nearly four centuries of European presence in Island Southeast Asia, the colonial legacy left a permanent imprint on the region – not merely in its material culture, but more importantly in the thinking and perception of its people. The colonial, which was superior in terms of technological advancement, was seen as representing modernity, progression and civilisation (Andaya & Andaya, 1982, p. 156; Ricklefs, 2007, p. 160). Through the implementation of a new bureaucratic order, colonial policies ensured that support was given to the native elite ruling groups while at the same time being very suspicious of the Islamist groups in particular (Ricklefs, 2007, p. 171). The European colonialists' intervention in the politics and economic practices of the traditional societies effectively fostered divisions within society. In British Malaya – the term given to the Malay Peninsula after the implementation of British bureaucracy order in the periods between 1874 and 1919 (Andaya & Andaya, 1982, p. 157) – British policy resulted in a widening gap between the native elite groups and the peasants (Andaya & Andaya, 1982, p. 175).

The cleavage was initially evident from a material perspective. To demonstrate this point, it is essential that the economic conditions of the rulers are viewed prior to and after the implementation of the new bureaucracy. In the Malay Peninsula, the Malay sultan was known to have led a humble lifestyle, not distinctively different from the peasants. Rulers such as Raja Muda Perak and Sultan Abdul Samad of Selangor were reported to have mingled with their subjects at cock-fighting arenas, in the markets and in *padi* fields (Andaya & Andaya, 1982, p.175).

The diary of Bloomfield Douglas, the Selangor Resident (1876–82), recorded an encounter with the old Sultan Abdul Samad, who was sometimes seen '…seated astride on a carpenter's bench, or else squatting on the ground…He was usually dressed in nothing but a very scanty little kilt…hardly distinguishable from an old Malay peasant' (Gullick, 1992, p. 36). In 1826, a visitor to the court of Perak noticed that the sultan's hall of audience (*balai*) was 'built in the usual rude Malayan fashion' and that 'they live very plainly'. On a similar occasion, Baginda Omar, the Sultan of Terengganu, was

reported in 1846 to be 'very plainly dressed…in a jacket very shabby and worn out' (Gullick, 1992, p. 11).

By the third quarter of the 19th century, there was a pronounced change in the living styles of the Malay elites. Through their constant association with the British officials and their exposure to more lavish living (demonstrated by cities like Singapore and Penang), as well as their access to new capital brought by the development of tin mining activities, the cleavage between the Malay rulers and their subjects widened (Andaya & Andaya, 1982, pp. 133–8).

Similar conditions were created in Java, where Dutch association with the *priyayi* and suspicion of the *pesantren* resulted in the polarisation of intellectual and cultural precepts (Ricklefs, 2007, p. 171). For the *priyayi*, European ways exemplified civilisation and modernity (Ricklefs, 2007, pp. 115, 165), which was in contrast to the old-fashioned and puritan lifestyle brought by Islam (Ricklefs, 2007, pp. 165, 222). To add to the already compartmentalised society, a new category of Islam – that is, Modernist Islam – emerged in the early 20th century, led by the Muhammadiyah movement (Ricklefs, 2007, pp. 220–1). This movement sought not only to reinvigorate the pristine truths in the original revelation of the Prophet Muhammad (S), but also to eliminate obscurity and unlawful innovations embedded in Javanese Islam. However, unlike their orthodox predecessors, the followers of this movement embraced the modern learning of the west and thus were seen as more capable of encountering modernity brought by the Europeans (Ricklefs, 2007, pp. 220–1).

Embodied in this conflict are the dichotomies between tradition and innovation, old and new, old-fashioned and modern. While the *priyayi* embraced European culture, as evident in their enthusiasm in acquiring western education and adopting Dutch-style lifestyles (Ricklefs, 2007, p. 160), they also took special interest in reliving Javanese pre-Islamic heritage, which was encouraged mainly due to the Europeans' fascination with that period (Ricklefs, 2007, pp. 172, 177). At the other end of the spectrum was the religious camp that sought to reform the tradition by shifting their theological and civilisational orientations towards Makkah (Woodward, 1989, pp. 134–6).

Thus, the notion of 'civilisation' and being 'civilised' brought different meanings to the divisions in society. While in the Federal Malay States (FMS)[117] under the British authority, 'being civilised' indicated a willingness to 'adopt the English law, English government and, as far as possible, an English way of life' (Andaya & Andaya, 1982, p. 151), the criteria of 'civilisation' as measured by the Malays of Kelantan and Terengganu was the ability to achieve higher learning by travelling to the Middle East (Andaya & Andaya, 1982, p. 194). In fact, the emergence of Modernist Islam was seen as a reaction towards the modernity brought by the West.

Consequently, it should come as no surprise that when the Europeans planted their foreign architecture in the colonised lands, there were little resistance from the indigenous society. When the Europeans formed their enclaves in the important cities throughout the region, they brought with them the architecture of their motherland, with minor adjustments according to climatic conditions. Even building materials and labour were imported from abroad. The building codes were also formulated according to the European building practices (Passchier, 2007, p. 51).

The early houses of the colonial officers were built of bricks, plastered in white lime, usually in the form of double storey construction, with a high pitch roof covered with tiles. This *landhuis* style, which was recorded as early as the 18th century, when Valentijn visited Bantam (Banten), was reported to have been an accomplished style, at a time when the local people were still building their houses in vernacular materials (Lombard, 2000b, p. 179).

Its influence on local architecture was soon to be revealed. As early as the 17th century, Masjid Agung Banten had a *madrasah* (called *Tiyamah*) built next to the prayer hall in a Dutch style (Figure 8-9). In the 19th century, when the *kratons* in Cirebon, Yogyakarta and Surakarta were renovated and upgraded, European influence was evident in the employment of classical columns, roofs with pediments and stained glass windows (Lombard, 2000b, p. 179). This influence is also seen in mosques built in Batavia – in particular the Masjid Langgar Tinggi – and in any subsequent upgrading works done on old mosques such as Masjid An-Nawier and Masjid Al-Mansur.

[117] Perak, Selangor, Negeri Sembilan and Pahang.

Figure 8-9 *Tiyamah* of Masjid Agung Banten: the two-storey-high gable structure on the left.

The dominance of European architecture had a significant impact on the tastes and styles of ordinary people. The classical architectural order used in public buildings became the fashion of the era. The neoclassical colonnade was popular to the extent that prefabricated concrete columns could be found sold along the roadside of poor kampongs (Passchier, 2007, p. 102). As this peculiar style was identifiable with social status and was the prerogative of the ruling class, it found its audience even within the Chinese diaspora communities, which were keen to identify themselves through European architecture (Pratiwo, 2007, p. 81).

The dilemma of 'to be' or 'not to be' prevailed even after the creation of the modern nation-states of Island Southeast Asia. In Indonesia, the first president, Sukarno, had refused to use wood or roof tiles as a mosque's building materials (Dijk, 2007, p. 63). He had also refused to build a mosque in the form of Masjid Demak or Masjid Banten. In his oft-quoted oration in front of the Istiqlal Mosque committee, Sukarno propounded:

> 'Let us build a Friday Mosque which doesn't use roof tiles, but one which is built from reinforced concrete…which is finished with marble, and paved with marble, whose doors are from bronze. And not only must the materials be concrete, bronze and fine stones but of grand dimensions, not just a Friday mosque, which we already have for Friday prayers or special celebrations, for three or four thousand people. No! Build a Friday Mosque. Let us build a Friday Mosque which is the largest in this world, the largest in the world' (O'Neill, 1993, pp. 157–8).

Sukarno never lived to inaugurate his mosque. The inauguration was done by President Suharto, who assured his people that the mosque was the correct architectural representation, that 'Indonesians had shown to themselves and to the world that they were a great nation and a nation capable of uniting material life and spiritual life' (Dijk, 2007, p. 63). Ironically, just a few years later, in 1982, he founded *Yayasan Amalbakti Muslim Pancasila* (YAMP), which had, among its main objectives, the goal of building mosques across the Indonesian archipelago in the form of the *tajug* prototype, as this form served as a reference to 'the deeds of the *Wali (Songo)*'(Dijk, 2007, p. 65).

By 2004, YAMP had successfully constructed 940 out of 999 mosques planned (www.yamp.or.id/aktifitas.php). The mosques' model and architecture was a product of advancement in modern technology that enable building parts to be prefabricated based on standard, ready-made designs (see Figures 8-10 and 8-11). The financial support for this ambitious programme came from obligatory deductions of salaries of employees in public sectors – sometimes as little as 50 *rupiah*. Suharto, as the patron for the foundation, proposed the salary deduction scheme as a mechanism through which the public was induced to give charitably (www.yamp.or.id).

The return of the pyramidal mosques may have been an effort by Suharto to revive traditional elements that had been discarded under the 'Guided Democracy' policy of the Sukarno's regime. Linking the mosques to the venerated *Wali Songo* further evoked the collective memory of the people with regards to ancestral practices.

However, not all the people were convinced. Revianto Santoso spoke of people's resistance towards the '*masjid amal bakti*' (the *amal bakti* mosque), which was seen as a means of exerting totalitarian control over the masses through salary deduction (R. B. Santoso, 2000a). In addition, the prefabricated materials gave an impression of "cheap" (*murah dan kodian*) architecture. The mosque failed to impress a society who sought an architectural expression that exhibited artistic innovation as well as technological advancement that they could take pride in. The programme created a negative sentiment toward traditional architecture, to the extent that mosques without a dome were labelled '*masjid amal bakti'*, while a domed mosque was the mosque proper (R. B. Santoso, 2000a).

SOURCE: (NAPAKMASIGIT.BLOGSPOT.COM)

Figure 8-10 Masjid Amal Bakti Pancasila, Kebun Raya Bogor.

SOURCE: (YAYASANMASJIDHIDAYATULLAH1.WORDPRESS.COM)

Figure 8-11 Masjid Hidayatullah, Kota Blitar – built based on YAMP Masjid Pancasila template.

In Malaysia, the unique innovation of the parasol form of the Masjid Negara never caught up with the Muslim population. Baharuddin Kassim, the architect of Masjid Negara, who in 1988 was in charge of the design of Selangor State Mosque (Masjid Sultan Salahuddin Abdul Aziz Shah), sought inspiration from Iranian mosques to come up with a mosque that at the time of construction had the largest dome in the southern hemisphere, boasting four minarets soaring 142.3 meters, which were considered the highest in the world (Figure 8-12). This time around, the mosque was meant to be a symbol of 'the supremacy of Islam and the sovereignty of Muslims in Malaysia' (www.virtualmalaysia.com).

SOURCE: AHMADFAIZAR.BLOGSPOT.COM

Figure 8-12 Masjid Sultan Salahuddin Abdul Aziz Shah, Shah Alam.

In Indonesia, and especially in Java, the dichotomy between 'the old' and 'new' – between 'tradition' and 'modernity' – was more pronounced, perhaps due to its rich cultural heritage (Lombard, 2000b, p. 174). In Malaysia (i.e., Malay Peninsula), the lack of any significant or monumental archaeological relic provided the colonial power with a blank sheet of paper to introduce any sort of architectural vocabulary. Hence, the British success in the Malay Peninsula was unprecedented and unique in a sense. The introductory of the 'Indo-Saracenic' style to the region received no objection whatsoever.

Even in India, the British Public Works Department (PWD) did not sponsor or design any religious buildings (O'Neill, 2000, p. 22). The mosques in India, whether of Mughal-Delhi, Gujerat or Deccan regions (regions that were supposed to be the originators of Indian-Mughal style), were also never built by 'alien architects' (O'Neill, 2000, p. 26). These mosques, which supposedly were the sources for the British Malaya flavour, were also not centralised in plan, as with Masjid Ubudiah, Masjid Zahir and Masjid Kapitan Keling. In India, a dome on a centralised plan was only used for tomb monuments.

In addition, in India, the art educators and conservation groups played significant roles in highlighting the faulty representation sought by the PWD of British India by experimenting on the so-called 'Raj Style' and 'Indo-Saracenic' style – an attempt that they charged as having 'no genuine understanding of the underlying logic and spirit of the traditions they sought to mimic' (Scriver & Prakash, 2007, p. 35). To these groups, PWD was seen as 'the principal agent of a senseless and deadly assault upon India's autonomous building tradition' (Scriver & Prakash, 2007, p. 34).

Yet, in the Malay Peninsula, there was not the slightest rejection recorded against the employment of these alien idioms. As more and more mosques accepted the domes, arches, minarets and *chatris* as 'Islamic', the so-called Indian-Mughal repertoire became a subject of architectonic idiosyncrasy (O'Neill, 2000, p. 26). Such whimsical display is evident in the application of horseshoe arches in Masjid Ubudiah, which had no obvious functions except as complementary features to an imposing scheme (Figure 8-13).

A SQUASHED HORSE-SHOE ARCH (RIGHT); MORE POINTED AND SQUASHED ARCHES, AT THE MAIN PORCH DEDICATED FOR ROYAL ENTRY (LEFT).

Figure 8-13 Masjid Ubudiah with various arches

Ironically, despite its dubious beginnings, over time the dome has become accepted as a symbol of a mosque. A mosque without a dome is not a mosque proper. An incident in the small hamlet of Ulu Tiram in Johor reflected this association. A *surau* that had been upgraded to a Friday mosque received funding for renovation. After a few weeks of upgrading work, the mosque was finally completed. However, the kampong folks were dismayed. 'Is this a factory or a mosque?' – a perfect expression that captured the disappointment of not seeing a mosque with a dome (Hajjah Zaleha Tahir 2007, personal communication). A few months later, a dome was finally put on the flat roof of the mosque's porch.

Indonesians, however, had a better and more creative solution to the problem. Alongside kampong roads, it was common to see prefabricated aluminium domes of various sizes, ready for purchase. It was a similar scenario to the prefabricated precast concrete classical columns that are still being sold by the roadside today. It is obvious that, since its beginning, the dome was never installed as a response to structural, liturgical or cultural reasons. In the renovation works carried out on Masjid Sunan Ampel, for example, the dome could not even be seen from inside the prayer hall, which had a flat suspended ceiling lining. Demonstrating the dilemma of 'to be' or 'not to be',

this dome is currently covered with steel structures forming a pyramidal roof (Figure 8-14).

SOURCE: N-HAFIZAH.BLOGSPOT.COM

Figure 8-14 Masjid Sunan Ampel extended prayer hall: the dome now covered with a pyramidal structure.

8.4 Conclusion and Significance of Study

It is unfortunate that the Muslims in Island Southeast Asia never took the opportunity to delve further into their historical and cultural heritage and benefit from the fountain of their civilisation. On the same note, it is regrettable that the vast experience gathered from their Muslim brothers elsewhere did not arouse in them the desire to innovate. The liberty given by the *Qur'ān* and the *Sunnah* with regards to the architectural form of the mosque could have induced them to create architectural representations that satisfied both cultural and liturgical requirements.

There are many elements in the mosque design that could have been explored further, based on religious and cultural experiences. The advancements in technology that opened up greater communication and networking venues for the Muslim *ummah* resulted in the Muslims forming closer associations with the greater Islamic world. In addition to their spiritual connection, they found ways to connect themselves by embracing similar culture-orientated elements. The impact is seen in mosque forms that mimic the mosques found in mainland Islam or regions with stronger Islamic civilisations.

From the outset, this move seems to have been a sincere expression of unity and solidarity. However, under closer scrutiny, the Muslims in Island Southeast Asia had actually found a short cut in expressing their Muslim identity, by detaching themselves from cultural heritage and adopting foreign elements without undergoing the process of synthesis, filtering and selection. In the rush to achieve progress and modernity, the Muslim society in Island Southeast Asia was also obsessed with anything that was *baroe* (new) (Lombard, 2000b, pp. 177-8). Thus, the outcome was direct copying, regardless of the source – either from the East or the west – according to the prevailing fashion and taste.

With the exception of several small hamlet mosques, which may have embodied the real essence of a mosque as a community centre, most other mosques became the subject of personal, economic or political display by the patrons. Reference can be made to the contrast between urban mosques and small community mosques built by village members. Despite their large scale, elaborate decorations and expensive materials

employed, the 20th century urban mosques are unable to even attract enough congregations to attend daily prayers.

In comparison, despite its small size, a village mosque efficiently serves its kampong folks. At the same time, it is able to display the ingenuity of traditional crafts, as the building size is small and the level of complexity does not require the import of building materials or specialised labour (Abdul Rochym, 1983, p.138). As mosques become increasingly symbolically charged (Abdul Rochym, 1983, p. 139; Grabar, 2006, p. 121; O'Neill, 1993, p. 54), they deviate further away from their original liturgical conception.

This study has enabled mosques in Island Southeast Asia to be studied for the first time, based on a detailed typological analysis. By looking at the region as a unified entity due to shared cultural and historical experiences, this study has provided a fresh framework for architectural critique of pre-modern Islamic civilisation of the region. In addition, by taking samples from across the region from the 15th to the 20th century, and subjecting them to the same vigorous analyses, the present study has succeeded in uncovering the embedded ingenuity of traditional design, as found in the mosques of the *tajug* prototype.

The strength of this methodological approach lies in the fact that salient characteristics of Island Southeast Asian mosques are able to be compared to the distinguished design parameters of the Prophet's Mosque, which this study treats not as a cultural product (read: Arabic), but more importantly as a translation of divine requirements for a mosque design. By taking this approach, the present study was able to cut across cultural boundaries, thus pin-pointing and highlighting designs that are compatible with Islamic aspirations, regardless of their material and technological or cultural representation.

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APPENDIX

BUILDING SURVEY FORM

1	Name of the building/ Historic name	
2	Date built (century)	
3	Original owner/ patron	
4	Current/main users	
5	Property Address	
6	Original builders/architect	
7	Historical significance	
8	Change of use (if any)	
9	Date of extensions/modifications (if any)	Building part: Date modify: Architect/builder:
10	Building condition	Completely new/ partly modified/Modified but retain original form/dilapidated/in ruins Specify:
11	Other descriptions	
12	Site contours	Flat ( ) Sloping ( ) Hill-top ( ) Valley ( )
13	Historical Placement	Main road ( ) Waterway ( ) Commercial Center ( ) Administrative ( ) Others ( ) Specify:
14	Current Placement	Main road ( ) Waterway ( ) Commercial Center ( ) Administrative ( ) Others ( ) Specify:
15	Immediate context	Village ( ) City ( ) Public Space ( ) School ( ) Others ( ) Specify:

16	Approach	Immediate ( ) Through gateways ( ) Courtyard ( ) Park ( ) Levels ( ) Water ( ) Graveyards ( ) Others ( ) Specify:
17	Distance from settlement	Close ( ) Medium ( ) Far ( ) Specify:
18	Mosque Type	Friday mosque ( ) Non-Friday mosque ( ) Other ( ) Specify: State mosque ( ) Community mosque ( ) Tomb mosque ( ) Sultan's Mosque ( ) Private mosque ( ) Other ( ) Specify:
19	Building context	Detached ( ) Semi-detached ( ) Single ( ) Group of Buildings ( ) Others ( ) Specify: Building 1: Building 2: Building 3: Building 4: Building 5:
20	Functional Spaces/Elements	Main Prayer Hall ( ) Female Prayer area ( ) Ablution ( ) Toilet M/F ( ) Veranda ( ) Mimbar ( ) Mihrab ( ) Minaret ( ) Bedug ( ) Administration ( ) School ( ) Library ( ) Tomb/Cemetery ( ) Courtyard ( ) Store ( ) Other: Specify:
21	Building height	Main building:_____storey Single/double volume Specify: Other buildings:
22	Foundation	Slab on grade ( ) on stilts( ) Other ( ) Specify:
23	Construction material	Timber frame( ) Brick( ) Concrete( ) Plastered Brick( ) Mixed( ) Specify:
24	Wall treatment	Finishes: Corbel( ) Banded brick( ) Bas-relief( ) Painted( ) Stucco finished( ) T&G vertical/horizontal boards( ) non-loadbearing panels( ) Decorations: Decorative panels( ) Pierced Work in stone/bricks( ) woodworks( ) others( ) Specify:
25	Open area	Courtyard( ) Park( ) Veranda( ) Arcade( ) Archways( ) Covered walkways( ) balconies with baluster ( ) Specify:

26	Roof material	Clay Tiles( ) Slate( ) Metal roofing( ) Wood shake( ) Others( ) Specify:
27	Roof type	Main building: Hipped *(bumbung lima)* ( ) Gable roof *(bumbung panjang)*( ) Pyramidal *(limas, tajug)* ( ) flat( ) variations and hybrids( ) Specify: Other buildings: Hipped *(bumbung lima)* ( ) Gable roof *(bumbung panjang)*( ) Pyramidal *(limas, tajug)* ( ) flat( ) variations and hybrids( ) Specify:
28	Roof treatment	Main building: Trim: Decorated eaves-board ( ) eaves-bracket( ) Plain( ) Parapet: Pierced( ) Crenellated( ) Stepped( ) Half-circular( ) decorated with arches, relief etc.( ) Gable Truss( ) Brace( ) Ornamented ridge( ) Domed/Cupola( ) Minaret( ) High/low pitch( ) Dutch gambrel roof( ) cross gable( ), tiered roofs( ); dormers( ) Specify: Other buildings: Trim: Decorated eaves-board ( ) eaves-bracket( ) Plain( ) Parapet: Pierced( ) Crenellated( ) Stepped( ) Half-circular( ) decorated with arches, relief etc.( ) Gable Truss( ) Brace( ) Ornamented ridge( ) Domed/Cupola( ) Minaret( ) High/low pitch( ) Dutch gambrel roof( ) cross gable( ), tiered roofs( ); dormers( ) Specify:
29	Ventilation	Louvered latticed( ) pierced carvings( ) over window or door( ) air vent through roof structure( ) Other ( ) Specify:
30	Window type	Bay( ) Flat( ) Sliding( ) fixed( ) casement( ) awning( ) Transom (fanlight, ribbon-light over door) ( ) Other: ( ) No of Types: 1, 2, 3, 4 Specify: Position:
31	Window form	Rectangle( ) Pointed( ) Ogee( ) Arched( ) Other ( ) Specify: Position:

32	Window treatment	Decorated trim( ) glass jalousies( ) wood-louvered( ) screened( ) pediment over window( ) Specify:
33	Door form	Main door: Rectangle( ) Pointed( ) Round-top( ) Other( ) Specify: Other doors: Position: Rectangle( ) Pointed( ) Round-top( ) Other( ) Specify:
34	Door treatment	Main door: Plain( ) Shaped Mouldings( ) Decorated/carved( ) Pilaster( ) Pediment over door( ) Other( ) Specify: Other doors: Position:_____ Plain( ) Shaped Mouldings( ) Decorated/carved( ) Pilaster( ) Pediment over door( ) Other( ) Specify: Position:_____ Plain( ) Shaped Mouldings( ) Decorated/carved( ) Pilaster( ) Pediment over door( ) Other( ) Specify:
35	Floor material	Marble( ) Concrete( ) Timber( ) Carpet/Tiles finished( ) Other( ) Specify:
36	Keywords	*(For Endnote purposes only)*
37	Ceiling treatment	<u>Main Hall:</u> Exposed beams( ) flat/suspended( ) cupola( ) cornice( ) other( ) Specify:

		Other parts: Exposed beams( ) flat/suspended( ) cupola( ) cornice( ) other( ) Specify:
38	Decorative elements	Columns: circular( ) octagonal( ) carved( ) tiled( ) capital( ) base( ) Other( ) Beams/joints: carvings ( ) tiles ( ) paint ( ) decorative panels ( ) other ( ) Fenestrations: Mouldings( ) carved( ) pointed( ) Ogee( ) other( ) Staircase: Spiral( ) Carving ( ) Decorative panels ( ) other( ) Walls: Decorative panels( ) tiles( ) gable wall( ) pierced works (wood/stone/others) ( ) Calligraphy ( ) Ceilings: Ceiling flower ( ) Decorative panels ( ) Exposed beams ( ) Flat ( ) Tiered/levels ( ) Roof: Domed( ) onion-shaped( ) typical dome( ) Tiered( ) Gable ends( ) Other( ) Gateways( ) Fence ( ) Other: Specify:
39	Motif and patterns	Motif: Flora & vegetal ( ) Geometric pattern ( ) Zoomorphic ( ) 2D ( ) 3D ( ) Calligraphy ( ) Specify:
40	Stylistic influences	Indian-Mughal( ) Chinese( ) Moorish (Spanish) ( ) Regional vernacular( ) Colonial-European( ) Arab-Hypostyle( ) Ottoman-Turkish( ) other( ) Specify:
41	Plan section drawings (File Attachment)	*(For Endnote purposes only)*
42	Mihrab & Qibla wall	Recessed wall with cupola( ) domed( ) plain( ) rectangle with pilaster( ) decorated wall( ) other( ) Specify:
43	Figure (Research Album)	*(For Endnote purposes only)*

44	Mimbar material & design	Type: Inbuilt( ) fixed( ) movable( ) Specify: Material: Wood( ) cement rendered bricks( ) concrete( ) Specify: Decorative elements: carving( ) motif( ) colours( ) Specify: Stairs: no of rise( ) balusters( ) Chair and other accessories( ) Specify: Placement: left( ) right to mihrab( ) height( ) Other( ) Specify:
45	Minaret material & design	Material: Cement rendered bricks( ) wood( ) concrete( ) other( ) Height: no of storey( ) levels( ) Number : 1 2 3 4 more than 4 Placement: corners( ) right( ) left( ) Specify: Type: Attached( ) detached from main structures( ) Plan shape: round( ) square( ) rectangle( ) Octagonal( ) other( ) Stairs: spiral( ) other( ) inside( ) outside( ) Fenestrations: Rectangle( ) pointed( ) arched( ) Other( ) Specify: Minaret top: pointed( ) domed( ) flat( ) other( ) Wall treatment: cement rendered( ) mouldings( ) Specify:
46	Ablution	Ablution space: attached ( ) detached ( ) specify: Well( ) water pool( ) fountain( ) water tap( ) Other( ) Toilet facilities: yes/no. Man/woman Specify:
47	Women Area Treatment	Segregation from main hall: Partial ( ) Full ( ) Specify: Segregation treatment: screen( ) wall: half height ( ) full height( ) Specify: Placement: back/front/ left/right of main hall; ground/first level other( ) Specify: Entrance/Access: Separate( ) Through Main Hall( ) Through other spaces( ) Specify:

		Size:_____of Main Hall (fraction) Decorations: wall( ) ceiling( ) accessories( ) Other( ) Specify:
48	Main Prayer Hall	Main floor plan: rectangle( ) square( ) hybrid( ) Size: _____ Volume: single( ) double( ) ascending heights( ) Ceiling treatment: cupola( ) tiered-recessed( ) flat( ) other( ) Specify: Wall treatment: decorative elements( ) calligraphy( ) tiles( ) plain( ) other( ) Specify: Floor treatment: marble, carpet, tiles other; Accessories: storage for Qur'an( ) carpets( ) lightings( ) clock( ) podium for sermons( ) other( ) Specify:
49	Tomb & Cemetery	Yes/No Position: east/west/south/north/NE/NW/SE/SW of main hall Specify: Entrance: Free/ Restricted Specify: Mourning/veneration space: yes/no Decorative elements: door ( ) grave marker ( ) roof ( ) columns ( ) floor/ground ( ) ceiling ( ) fence ( ) gateways ( ) other ( ) Specify:
50	Other functions/elements	T&L space( ) school( ) library( ) mosque administrations( ) religious-related functions( ) Specify:
51	Research Notes	